SERVICE MANUAL 2100

marantz

model 2100

Am/Fm Stereophonic Tuner

TABLE OF CONTENTS

Section Title Page

1. P.W. BOARDS 1

2. TEST EQUIPMENT REQUIRED FOR SERVICING 2

3. AM ALIGNMENT PROCEDURES 2
   3.1 AM IF Alignment 2
   3.2 AM Frequency Range and Tracking Alignment 2

4. FM ALIGNMENT PROCEDURES 2
   4.1 FM Frequency Range and Tracking Alignment 2
   4.2 Stereo Separation Alignment 3
   4.3 Muting Threshold Adjustment 3
   4.4 FM Output Level Adjustment 3

5. VOLTAGE CONVERSION FOR EUROPEAN MODEL 3

6. DIAGRAMS 5
   6.1 Block Diagram 5
   6.2 Connection Diagram - U.S.A. & Canada 7
   6.3 Connection Diagram - Europe 9
   6.4 Schematic Diagram - U.S.A. & Canada 11
   6.5 Schematic Diagram - Europe 13
   6.6 Tuner Board Schematic Diagram and Component Locations - P200 15
   6.7 Front End Board Schematic Diagram and Component Locations - P100 19
   6.8 Power Supply Board Schematic Diagram and Component Locations - P800 - U.S.A. & Canada 20
   6.9 Power Supply Board Schematic Diagram and Component Locations - P800 - Europe 20
   6.10 Function Indicator Board Schematic Diagram and Component Locations - PY01 21
   6.11 Dial Lamp Board Schematic Diagram and Component Locations - PZ01 21

7. MAJOR COMPONENT LOCATIONS 22
   7.1 Cabinet - Front View - U.S.A. & Canada 22
   7.2 Chassis - Top View - U.S.A. & Canada 22
   7.3 Cabinet - Rear View - U.S.A. & Canada 23
   7.4 Chassis - Bottom View - U.S.A. & Canada 23
   7.5 Cabinet - Front View - Europe 24
   7.6 Chassis - Top View - Europe 24
   7.7 Cabinet - Rear View - Europe 25
   7.8 Chassis - Bottom View - Europe 25

8. EXPLODED VIEWS 26
   8.1 Packing Material Exploded View 26
   8.2 Mechanical Exploded View 27

9. PARTS LIST 29

10. TECHNICAL SPECIFICATIONS 34

INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model 2100 AM/FM Stereophonic Tuner.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operations in the receiver.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can usually be obtained through local suppliers.

1. P.W. BOARDS

As can be seen from the circuit diagram, the chassis of Model 2100 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Front End .... mounted on P.W. Board P100
2. Tuner .... mounted on P.W. Board P200
3. Power Supply .... mounted on P.W. Board P800
4. Dial Lamp .... mounted on P.W. Board PZ01
5. Function Indicator .... mounted on P.W. Board PY01

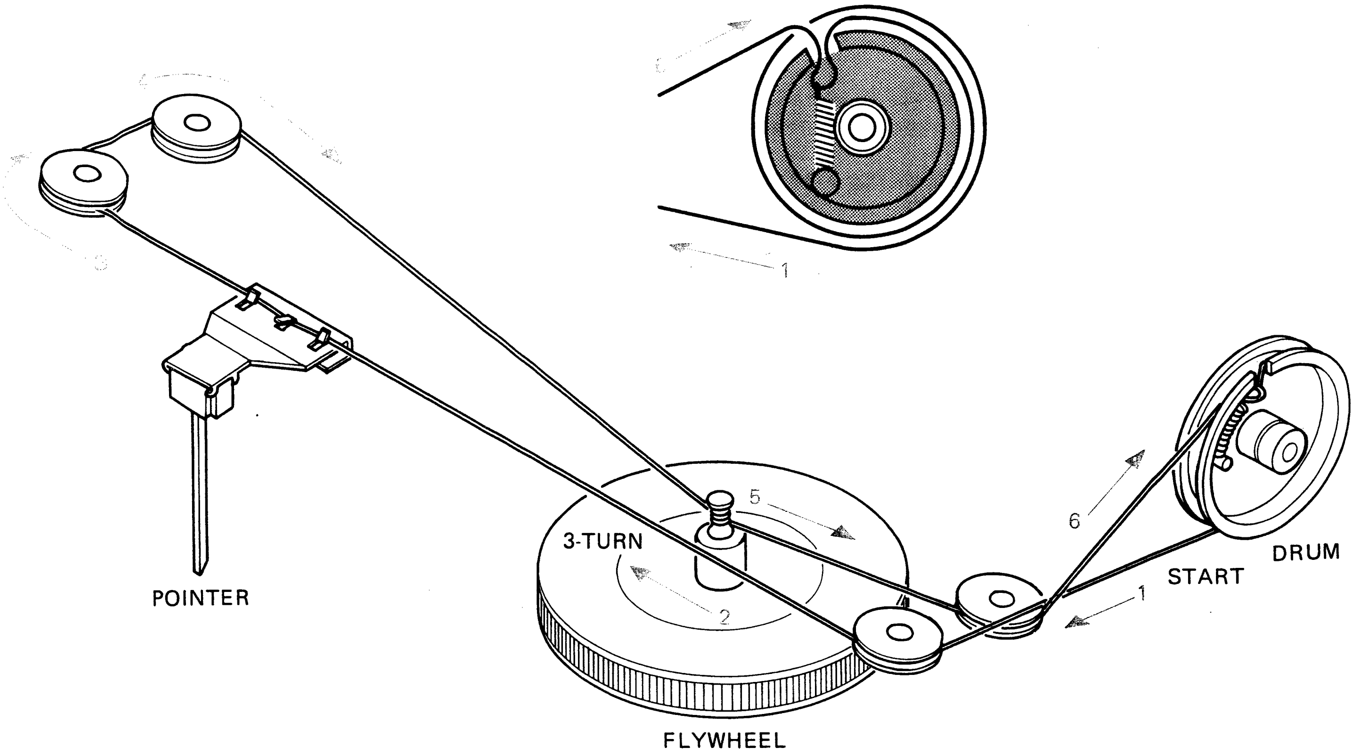


Figure 1. Dial Stringing

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model 2100 Tuner.

Item	Manufacturer and Model No.	Use
AM Signal Generator		Signal source for AM alignment
Test Loop		Use with AM Signal Generator
FM Signal Generator MPX Signal Generator	Sound Technology Model 1000A	Signal source for FM alignment Stereo separation alignment and trouble shooting
Distortion Analyzer Audio Oscillator AC VTVM	Sound Technology Model 1700A	Distortion measurements Sinewave and squarewave signal source Voltage measurements (AC)
Oscilloscope	Tektronix Model T932 Philips Model 3232	Waveform analysis and trouble shooting
Frequency Counter	Fluke Model 1900A	MPX Oscillator adjustment (VCO)
Circuit Tester		Trouble shooting
DC VTVM	Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801	Voltage measurements (DC)
AC Wattmeter	Simpson Model 1379	Monitors primary power to tuner
Line Voltmeter	Simpson Model 1359	Monitors potential of primary power to tuner
Variable Autotransformer	Superior Electronic Co., Powerstat Model 116B–10A	Adjusts level of primary power to tuner

3. AM ALIGNMENT PROCEDURES

3.1 AM IF ALIGNMENT

1. Connect a sweep generator to the L153 and an alignment scope to the J233 (T.P.).
2. Rotate each core of IF transformers L155 and L156 for the maximum height and flat top symmetrical response.

3.2 AM FREQUENCY RANGE AND TRACKING ALIGNMENT

1. Set AM signal generator to 515 kHz. Turn the tuning capacitor fully closed (place the tuning pointer at the low end) and adjust the oscillator coil L154 for maximum audio output.
2. Set the signal generator to 1650 kHz. Place the tuning pointer in the high frequency end and adjust the oscillator trimmer on the oscillator tuning capacitor for maximum audio output.
3. Repeat steps 1 and 2 until no further adjustment is necessary.
4. Set the generator to 600 kHz, tune the tuner to the same frequency and adjust a slug core of AM ferrite-rod antenna L001 for maximum output.
5. Set the generator to 1400 kHz and tune the tuner to the same frequency and adjust the trimming capacitor on the antenna tuning capacitor for maximum output.
6. Repeat procedures 4 and 5 until no further adjustment is necessary.

NOTE: During tracking alignment reduce the signal generator output as necessary to avoid AGC action.

4. FM ALIGNMENT PROCEDURES

4.1 FM FREQUENCY RANGE AND TRACKING ALIGNMENT

1. Connect an FM signal generator to the FM antenna terminals and an oscilloscope and an audio distortion analyzer to the OUTPUT jacks on the rear panel.
2. Set the generator to 87.4 MHz and provide about 3 to 5 μV. Place the tuning pointer at the low frequency end by rotating the tuning knob and adjust the pitch of oscillator coil L107 to obtain maximum audio output.
3. Set the generator to 109 MHz and provide about 3 to 5 μV. Rotate the tuning knob and place the tuning pointer at the high frequency end and adjust the trimming capacitor C121 for maximum output.
4. Repeat steps 2 and 3 until no further adjustment is necessary.
5. Set the generator to 90 MHz and tune the tuner to the same frequency. Decrease signal generator output until the audio output level decreases with the decreasing generator output. Adjust the pitch of antenna coil L102 and RF coil L104 for maximum output.
6. Set the generator to 106 MHz and tune the tuner to the same frequency. Decrease the signal generator output until the audio output level decreases with the decreasing generator output. Adjust the trimming capacitors of antenna and RF tuning circuits for maximum output.
7. Repeat steps 5 and 6 until no further adjustment is necessary.
8. Adjust the primary core (lower core) of discriminator transformer L202 so that the center tuning meter point-

er indicates its center at no signal applied. Set the FM signal generator to 98 MHz and increase its output level 1 kμV and tune the tuner to the same frequency so that the center tuning meter pointer indicates its center. Adjust the secondary core (upper core) of L202 for minimum distortion.

4.2 STEREO SEPARATION ALIGNMENT

1. Set the FM signal generator to provide 1 kμV at 98 MHz. Tune the tuner to the same frequency so that the center tuning meter pointer indicates its center. Then turn off the modulation of the generator, connect a frequency counter to test point J229 and adjust R301 so that the frequency counter may precisely read 76 kHz.
2. Modulate the generator with stereo composite signal consisting of only L or R channel (of course a pilot signal must be included).
3. Adjust the trimming resistor R317 for maximum and same separation in both channels.

4.3 MUTING THRESHOLD ADJUSTMENT

1. Set the FM signal generator output to provide 12.5 μV (IHF) at 98 MHz and tune tuner to the same frequency. Adjust the trimming resistor R212 for the threshold level of 12.5 μV. (During this adjustment turn the FM MUTING pushswitch "on").

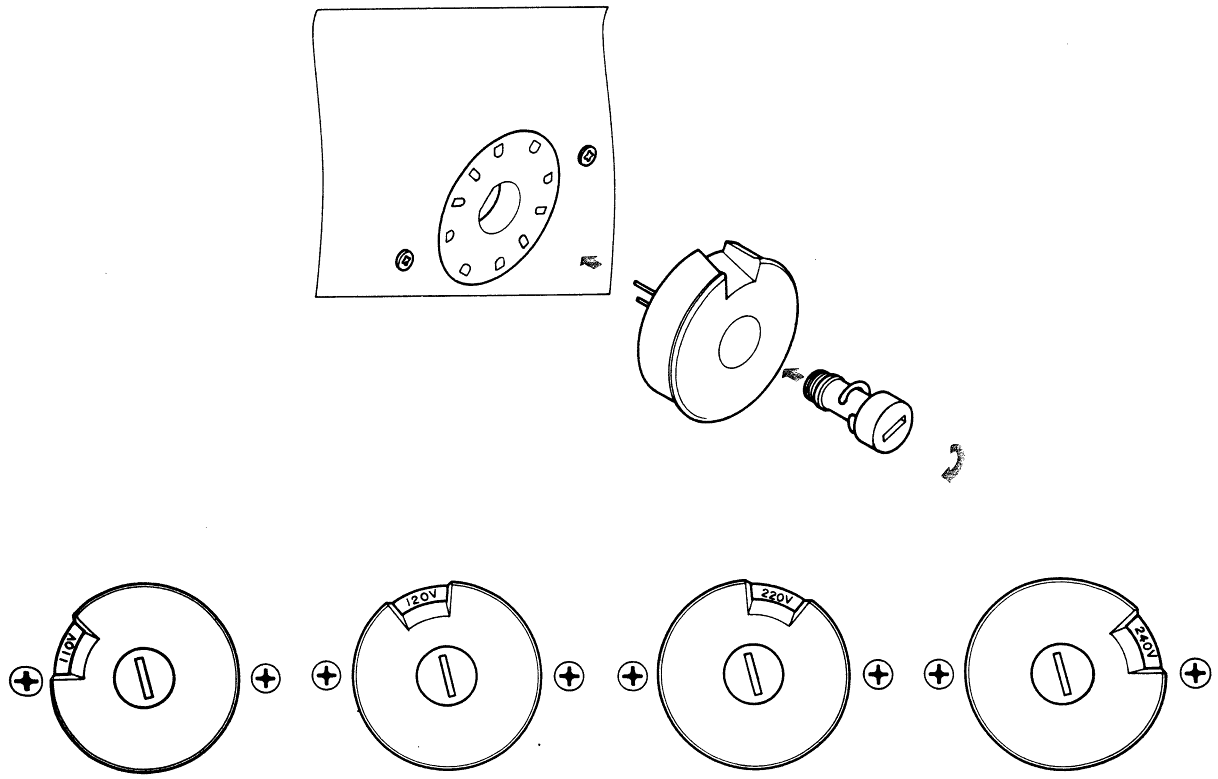
4.4 FM 25 μS OUTPUT LEVEL ADJUSTMENT

1. Set the FM signal generator to provide a 400 Hz, 50% modulated 98 MHz mono signal, at 1 kμV output. Precisely tune the tuner to 98 MHz.
2. Depress the FM 25 μS pushswitch, and adjust R215 until the outputs of both channels are 580 mV.

5. VOLTAGE CONVERSION FOR EUROPEAN MODEL

The European version of the Model 2100 is equipped with a universal power transformer that may be adjusted to operate at 110 V, 120 V, 220 V, or 240 V AC at 50 to 60 Hz. To convert the unit to a different power source voltage, reposition conversion plug as shown in Figure 2.

CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.



For 110V Operation

For 120V Operation

For 220V Operation

For 240V Operation

Figure 2. Voltage Conversion Chart

FTZ REGULATION

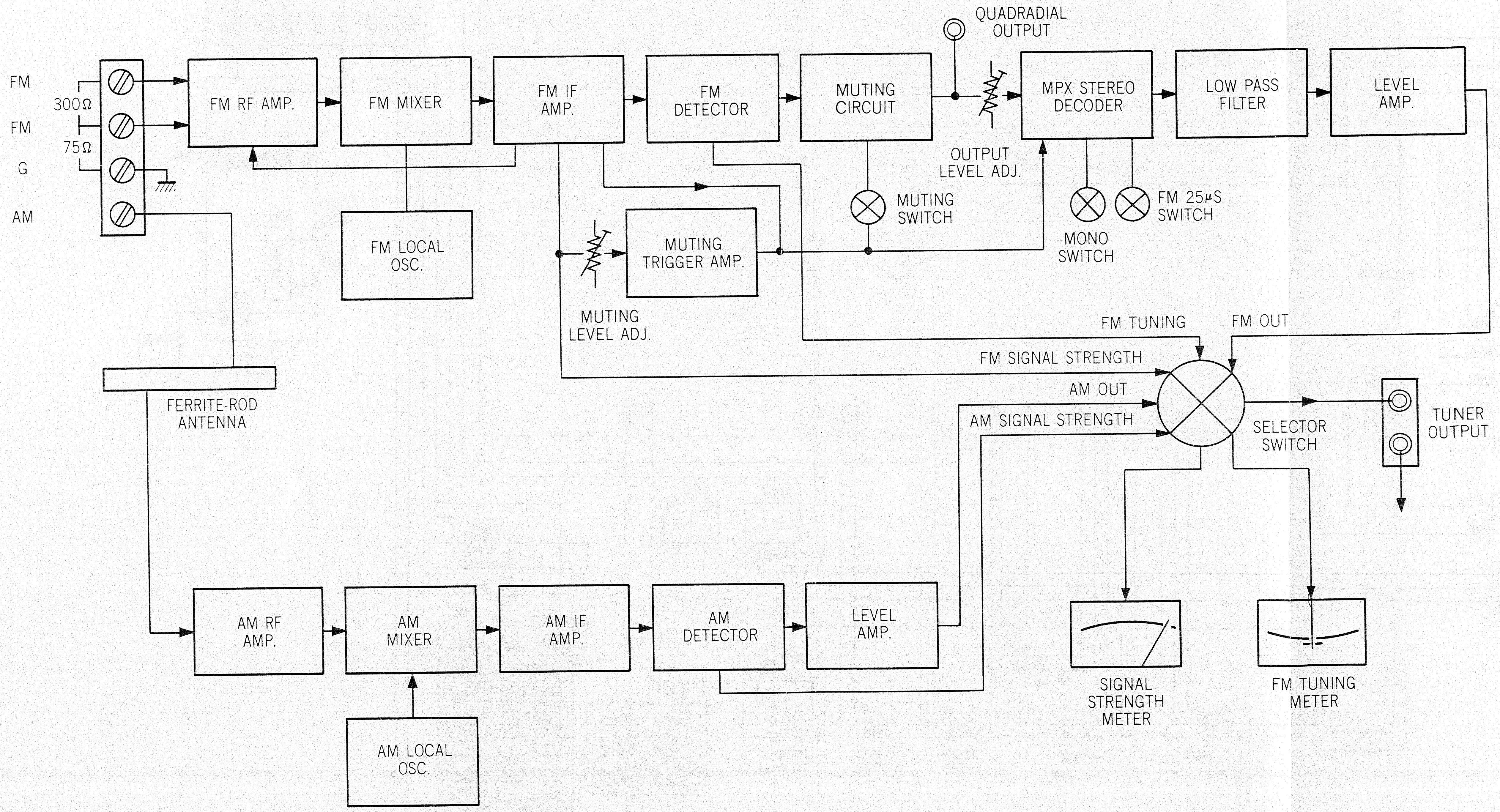
Instruction for the use in the range other than specified in FTZ codes.

Achtung für die Leute, die in dem Gebiet wohnen, wo die FTZ-Bestimmungen vorherrschend sind.

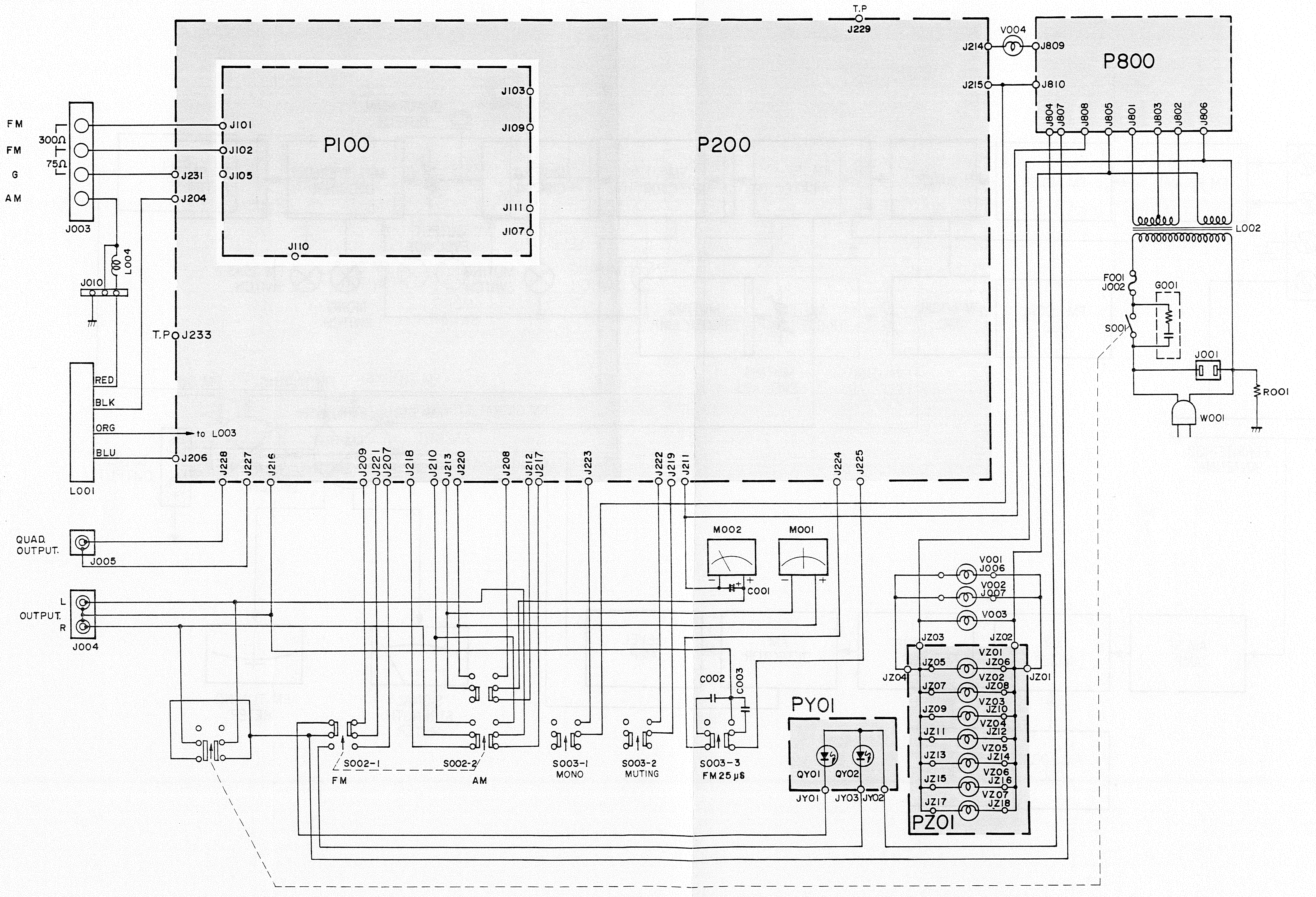
Sollte des Gerät auch für Frequenzen auszerhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfangebereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorspule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.

6. DIAGRAMS

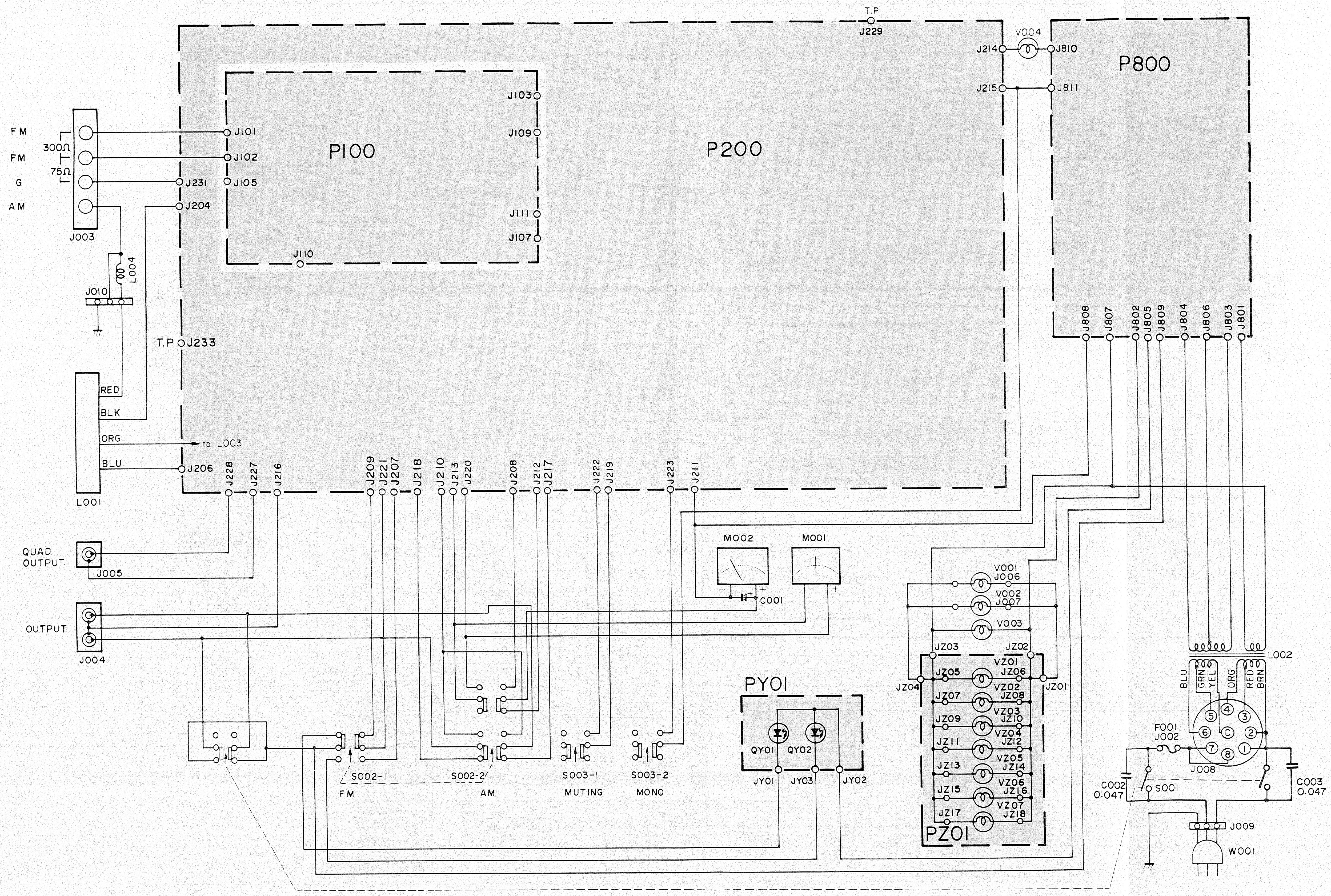
6.1 BLOCK DIAGRAM


FM
300Ω
FM
75Ω
G
AM
FM RF AMP.
FM MIXER
FM IF AMP.
FM DETECTOR
MUTING CIRCUIT
QUADRADIAL OUTPUT
MPX STEREO DECODER
LOW PASS FILTER
LEVEL AMP.
OUTPUT LEVEL ADJ.
MUTING SWITCH
MONO SWITCH
FM 25μS SWITCH
FM LOCAL OSC.
MUTING TRIGGER AMP.
MUTING LEVEL ADJ.
FM TUNING
FM OUT
FM SIGNAL STRENGTH
AM OUT
AM SIGNAL STRENGTH
SELECTOR SWITCH
TUNER OUTPUT
FERRITE-ROD ANTENNA
AM RF AMP.
AM MIXER
AM IF AMP.
AM DETECTOR
LEVEL AMP.
AM LOCAL OSC.
SIGNAL STRENGTH METER
FM TUNING METER

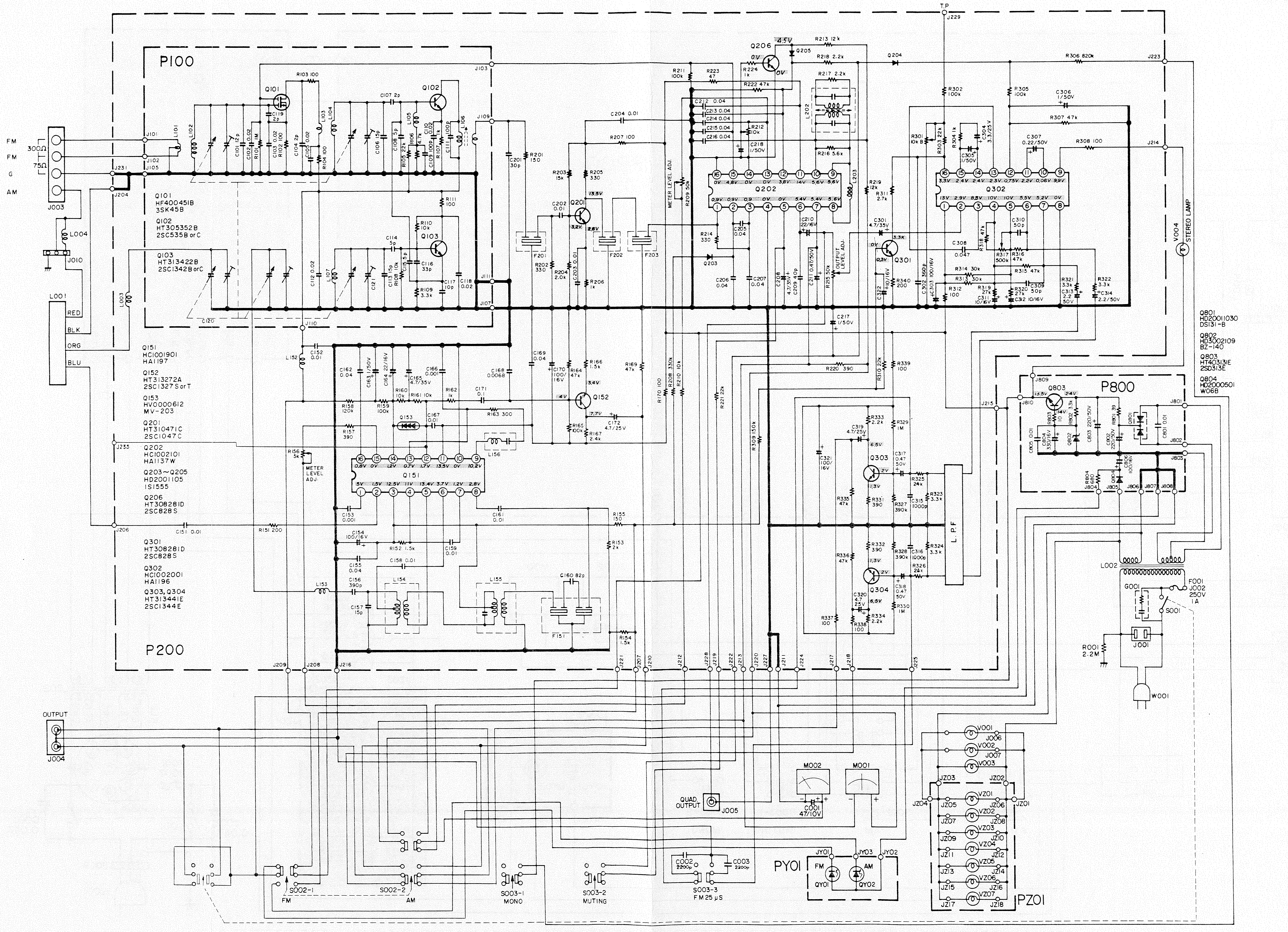
6.2 CONNECTION DIAGRAM - U.S.A. & CANADA


T.P
J229
V004
J214
J809
P800
J215
J810
J804
J807
J808
J805
J801
J803
J802
J806
L002
F001
J002
G001
S001
J001
R001
W001
J103
J109
P100
P200
J101
J102
J105
J111
J107
J110
FM
FM
G
AM
300Ω
75Ω
J231
J204
J003
L004
J010
T.P J233
RED
BLK
ORG
BLU
to L003
J206
L001
J228
J227
J216
J209
J221
J207
J218
J210
J213
J220
J208
J212
J217
J223
J222
J219
J211
J224
J225
QUAD. OUTPUT.
J005
OUTPUT.
L
R
J004
M002
M001
C001
V001
J006
V002
J007
V003
JZ03
JZ02
VZ01
JZ05
JZ06
JZ04
JZ01
VZ02
JZ07
JZ08
VZ03
JZ09
JZ10
VZ04
JZ11
JZ12
VZ05
JZ13
JZ14
VZ06
JZ15
JZ16
VZ07
JZ17
JZ18
PZ01
PY01
QY01
QY02
JY01
JY03
JY02
C002
C003
S002-1
FM
S002-2
AM
S003-1
MONO
S003-2
MUTING
S003-3
FM 25 μS

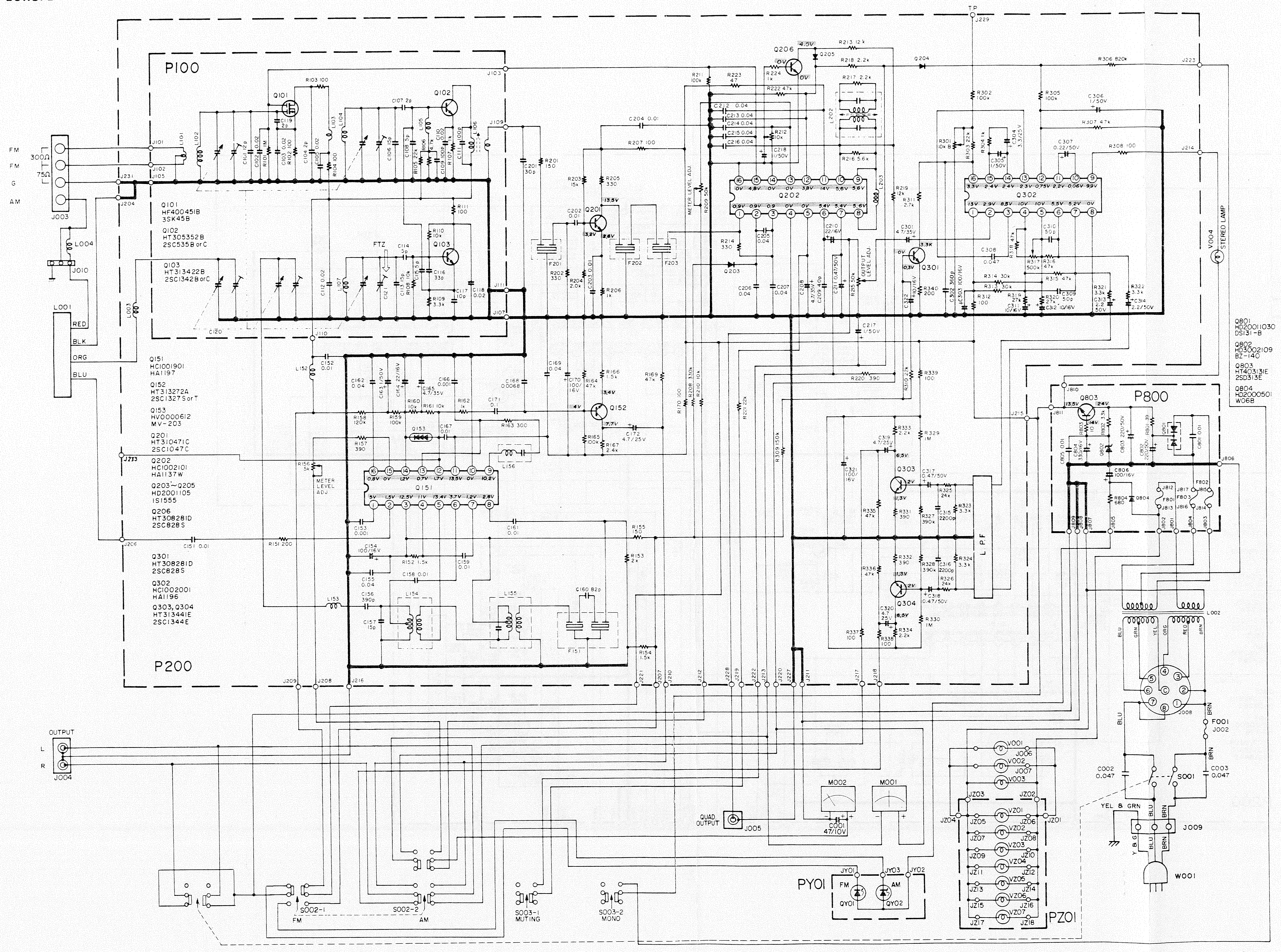
6.3 CONNECTION DIAGRAM - EUROPE


P100
P200
P800
PY01
PZ01
T.P
J229
V004
J214
J215
J810
J811
J103
J109
J111
J107
J110
J101
J102
J105
J231
J204
FM
FM
G
AM
300Ω
75Ω
J003
L004
J010
T.P J233
RED
BLK
ORG
BLU
to L003
J206
L001
J228
J227
J216
J209
J221
J207
J218
J210
J213
J220
J208
J212
J217
J222
J219
J223
J211
J808
J807
J802
J805
J809
J804
J806
J803
J801
QUAD. OUTPUT.
J005
OUTPUT.
J004
M002
M001
C001
V001
J006
V002
J007
V003
JZ03
JZ02
JZ04
JZ01
JZ05
VZ01
JZ06
JZ07
VZ02
JZ08
JZ09
VZ03
JZ10
JZ11
VZ04
JZ12
JZ13
VZ05
JZ14
JZ15
VZ06
JZ16
JZ17
VZ07
JZ18
QY01
QY02
JY01
JY03
JY02
S002-1
S002-2
FM
AM
S003-1
S003-2
MUTING
MONO
L002
BLU
GRN
YEL
ORG
RED
BRN
F001
J002
J008
C002
0.047
S001
C003
0.047
J009
W001

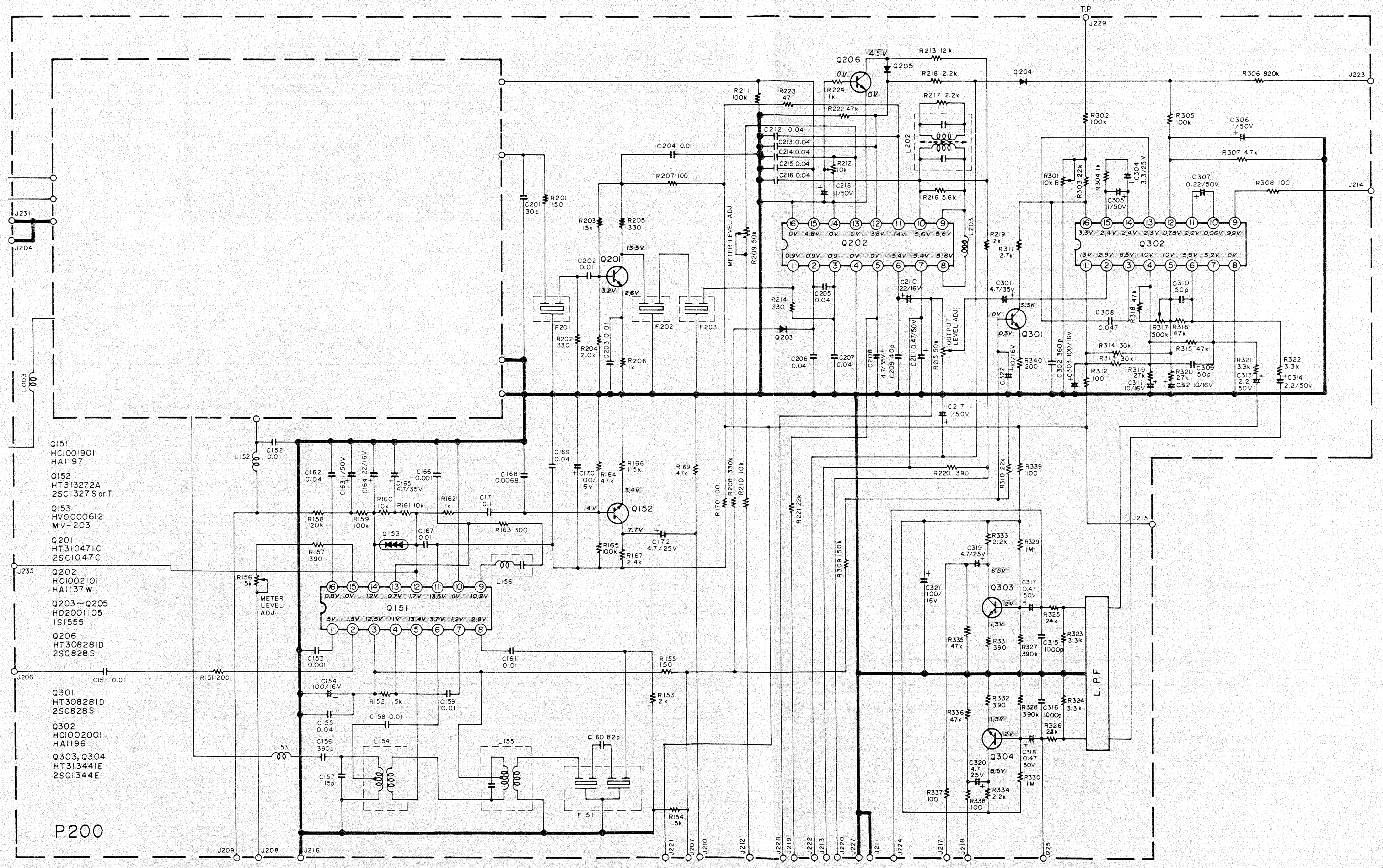
6.4 SCHEMATIC DIAGRAM - U.S.A. & CANADA


P100
P200
P800
PY01
PZ01
FM 300Ω
FM 75Ω
G
AM
J003
J004
OUTPUT
L001
RED
BLK
ORG
BLU
L004
J010
L003
Q101
HF400451B
3SK45B
Q102
HT305352B
2SC535B or C
Q103
HT313422B
2SC1342B or C
Q151
HC1001901
HA1197
Q152
HT313272A
2SC1327 S or T
Q153
HV0000612
MV-203
Q201
HT310471C
2SC1047C
Q202
HC1002101
HA1137W
Q203~Q205
HD2001105
1S1555
Q206
HT308281D
2SC828S
Q301
HT308281D
2SC828S
Q302
HC1002001
HA1196
Q303, Q304
HT313441E
2SC1344E
Q801
HD20011030
DS131-B
Q802
HD3002109
BZ-140
Q803
HT403131E
2SD313E
Q804
HD2000501
W06B
METER LEVEL ADJ.
OUTPUT LEVEL ADJ.
STEREO LAMP
V004
T.P
J229
L.P.F
F201
F202
F203
F151
L154
L155
L156
L002
F001
J002
250V
1A
S001
G001
R001
2.2M
J001
W001
V001
V002
V003
J006
J007
M002
M001
QUAD. OUTPUT
J005
C001
47/10V
C002
2200p
C003
2200p
S003-3
FM 25 μS
S002-1
FM
S002-2
AM
S003-1
MONO
S003-2
MUTING
FM
AM
QY01
QY02
JY01
JY03
JY02
VZ01
VZ02
VZ03
VZ04
VZ05
VZ06
VZ07
JZ01
JZ02
JZ03
JZ04
JZ05
JZ06
JZ07
JZ08
JZ09
JZ10
JZ11
JZ12
JZ13
JZ14
JZ15
JZ16
JZ17
JZ18

6.5 SCHEMATIC DIAGRAM - EUROPE


P100
P200
P800
FM
FM
300Ω
75Ω
G
AM
J003
L004
J010
L001
RED
BLK
ORG
BLU
Q101
HF40045IB
3SK45B
Q102
HT305352B
2SC535B or C
Q103
HT313422B
2SC1342B or C
Q151
HC100190I
HA1197
Q152
HT313272A
2SC1327 S or T
Q153
HV0000612
MV-203
Q201
HT310471C
2SC1047C
Q202
HC1002101
HA1137W
Q203~Q205
HD2001105
1S1555
Q206
HT308281D
2SC828S
Q301
HT308281D
2SC828S
Q302
HC1002001
HA1196
Q303, Q304
HT313441E
2SC1344E
Q801
HD20011030
DS131-B
Q802
HD3002109
BZ-140
Q803
HT403131E
2SD313E
Q804
HD200050I
W06B
FTZ
METER LEVEL ADJ
OUTPUT LEVEL ADJ
LPF
STEREO LAMP
TP
OUTPUT
L
R
J004
QUAD OUTPUT
J005
M002
M001
C001 47/10V
PY01
FM
AM
PZ01
S002-1
FM
S002-2
AM
S003-1
MUTING
S003-2
MONO
S001
C002 0.047
C003 0.047
F001
J002
YEL & GRN
J009
W001
L002
J008

6.6 TUNER BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P200


T.P
J229
J223
J214
J215
J231
J204
J233
J206
L003
Q151
HC1001901
HA1197
Q152
HT313272A
2SC1327 S or T
Q153
HV0000612
MV-203
Q201
HT310471C
2SC1047C
Q202
HC1002101
HA1137W
Q203~Q205
HD2001105
1S1555
Q206
HT308281D
2SC828 S
Q301
HT308281D
2SC828 S
Q302
HC1002001
HA1196
Q303, Q304
HT313441E
2SC1344E
P200
Q206
Q205
Q204
R213 12k
R218 2.2k
R217 2.2k
R306 820k
R302 100k
R305 100k
C306 1/50V
R307 47k
C307 0.22/50V
R308 100
L202
F201
F202
F203
C204 0.01
R207 100
R201 150
C201 30p
R203 15k
R205 330
C202 0.01
R211 100k
R223 47
R224 1k
R222 47k
METER LEVEL ADJ.
R209 50k
R216 5.6k
R219 12k
R311 2.7k
C301 4.7/35V
OUTPUT LEVEL ADJ.
Q203
Q301
Q302
Q303
Q304
L.P.F
Q151
Q152
Q153
L152
C152 0.01
L153
L154
L155
L156
F151
C160 82p
R156 5k
METER LEVEL ADJ.
R151 200
C151 0.01
R155 150
R153 2k
R154 1.5k
R220 390
R339 100
R221 22k
R309 150k
R310 22k
J209
J208
J216
J221
J207
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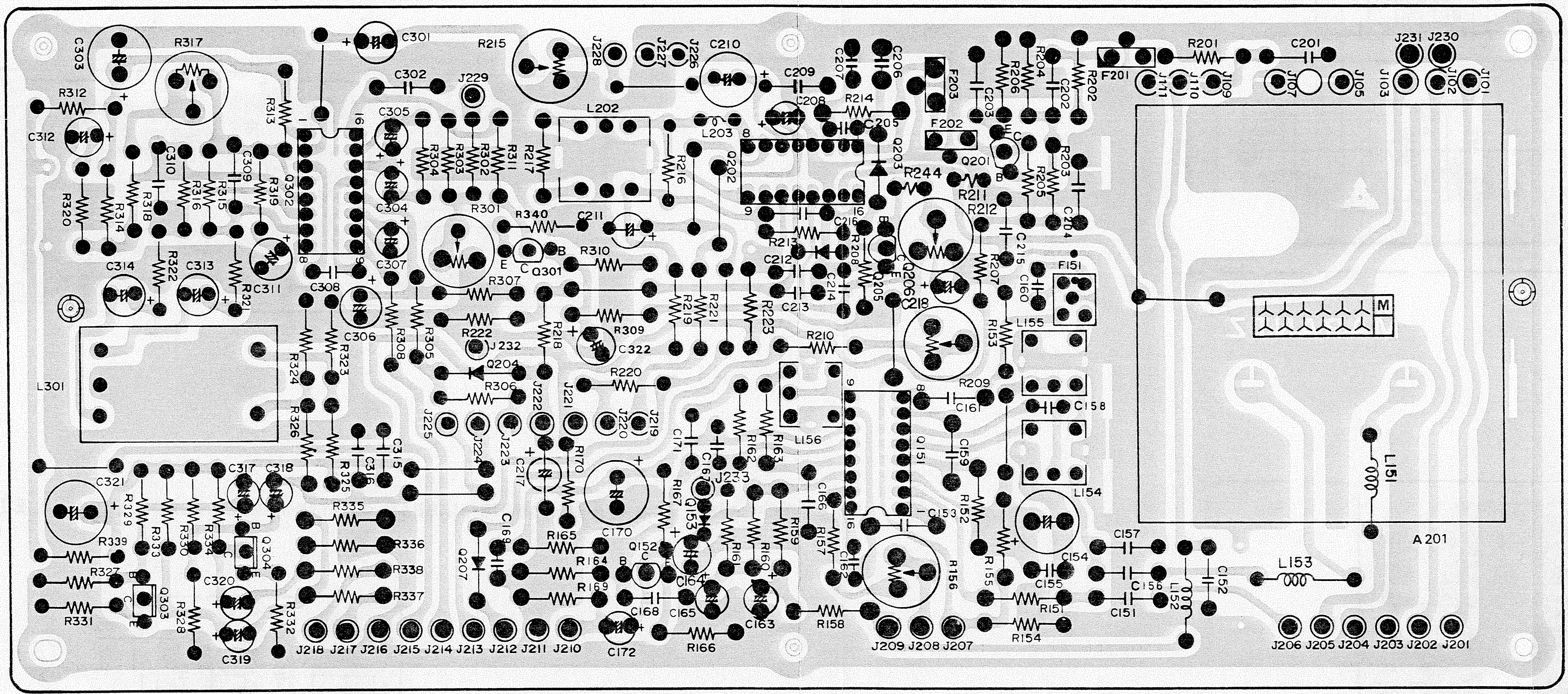
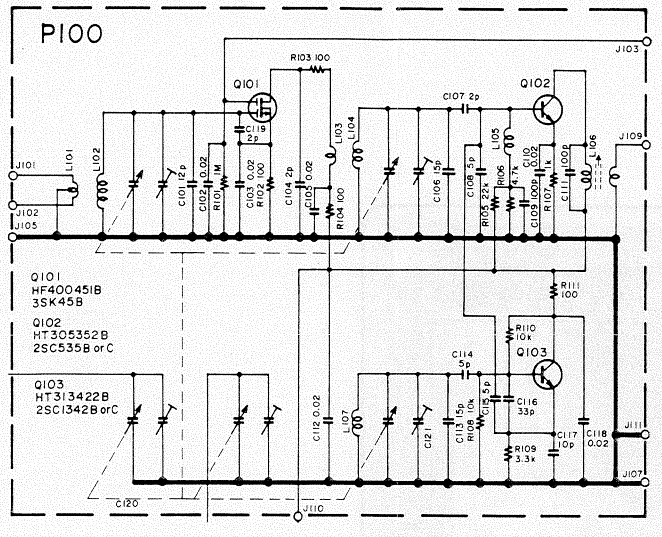
J212
J228
J219
J222
J213
J220
J227
J211
J224
J217
J218
J225


C303
R317
C301
R215
J228
J227
J226
C210
C209
C207
C206
F203
R204
R206
R202
F201
R201
C201
J231
J230
R312
C312
R313
C302
J229
L202
L203
C208
R214
C205
F202
C203
C202
J111
J110
J109
J107
J105
J103
J102
J101
R320
R318
C310
R314
R316
R315
C309
R319
Q302
C305
R304
R303
R302
R311
R217
R216
Q202
Q203
R244
Q201
R205
R203
C304
R301
R340
C211
R211
R212
C204
C314
R322
C313
C311
C308
C307
Q301
R310
R213
R208
C215
C214
Q205
Q206
C218
R207
C160
F151
C306
R307
R219
R221
R223
C212
C213
L155
L301
R324
R323
R306
R305
R222
J232
R218
R309
C322
R210
R153
Q204
R220
R209
C161
C158
R326
C315
J225
J222
J221
J220
J219
C171
L156
Q151
C159
C321
R329
C317
C318
R325
C316
J224
J223
C217
R170
C167
R162
R163
R152
L154
L151
R339
R330
R335
R336
R338
R337
Q304
C169
R165
C170
R167
Q153
J233
C166
R159
R157
C162
C153
A 201
R327
R331
Q303
C320
R328
R332
C319
Q207
R164
R169
Q152
C164
R161
R160
R156
R155
C157
C154
C155
C156
L152
C152
L153
C168
C165
C163
R158
R151
C151
R154
J218
J217
J216
J215
J214
J213
J212
J211
J210
C172
R166
J209
J208
J207
J206
J205
J204
J203
J202
J201
M

6.7 FRONT END BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P100


P100
Q101
HF400451B
3SK45B
Q102
HT305352B
2SC535B or C
Q103
HT313422B
2SC1342B or C
J101
J102
J103
J105
J106
J107
J109
J110
J111
L101
L102
L103
L104
L105
L106
L107
R103 100
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C116 33p
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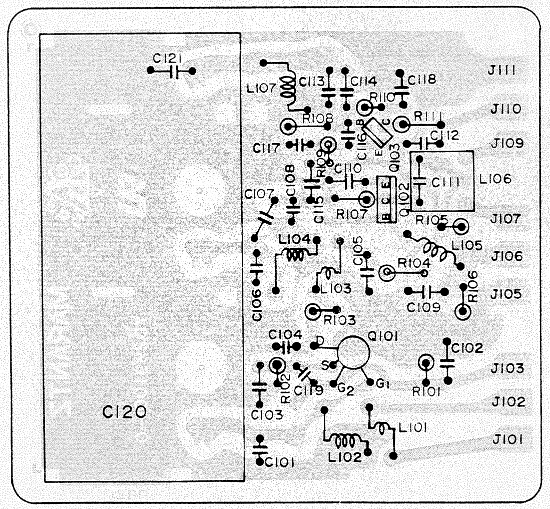
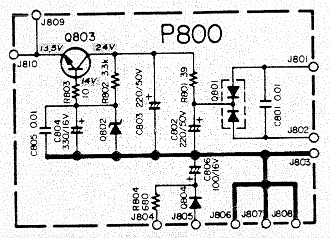
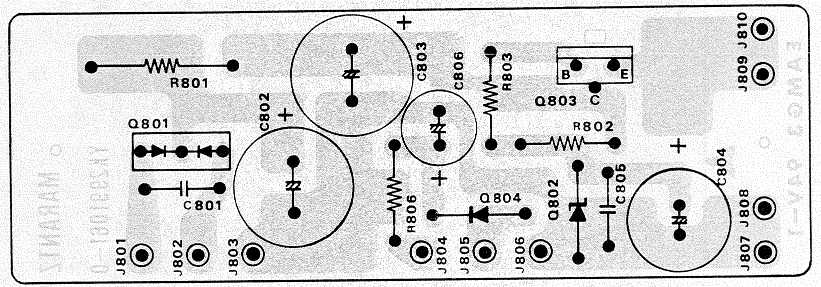
C118 0.02
R109 3.3k
C120

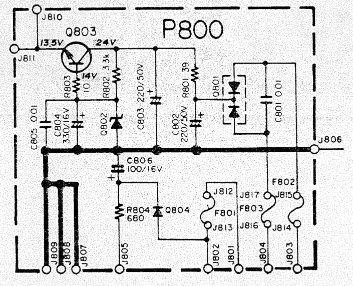

C121
J111
J110
J109
L106
J107
J106
J105
J103
J102
J101
C120
MARANTZ
Q101
Q102
Q103
C101
L101
L102
C102
C103
C104
C106
C107
C108
C109
C111
C112
C113
C114
C117
C118
L103
L104
L105
L107
R101
R102
R103
R104
R105
R106
R107
R108
R110
R111
S
G1
G2

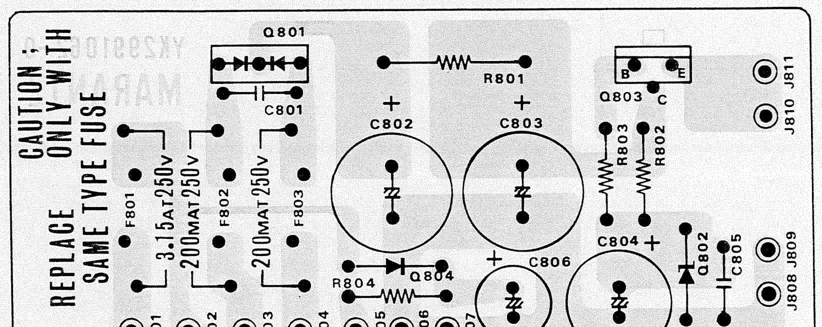
6.8 POWER SUPPLY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P800 - U.S.A. & CANADA


P800
Q803
J809
J810
J801
J802
J803
J804
J805
J806
J807
J808
24V
14V
13.5V
R801 39
R802 3.3k
C803 220/50V
C802 220/50V
C804 330/16V
C805 0.01
C801 0.01
C806 100/16V
D801
Q802
Q804
R804 680

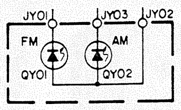

R801
Q801
C801
C802
C803
C806
R803
Q803
B
E
C
R802
C804
C805
R806
Q804
Q802
J801
J802
J803
J804
J805
J806
J807
J808
J809
J810

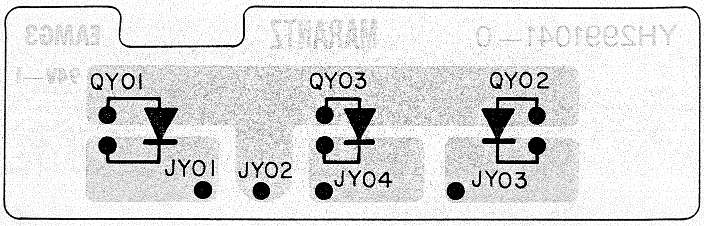
6.9 POWER SUPPLY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P800 - EUROPE


P800
Q803
J810
J811
J806
24V
14V
13.5V
R801 39
R802 3.3k
C803 220/50V
C802 220/50V
C804 330/16V
C805 0.01
C801 0.01
C806 100/16V
Q801
Q802
R804 680
Q804
F801
F802
F803
J801
J802
J803
J804
J805
J807
J808
J809
J812
J813
J814
J816
J817

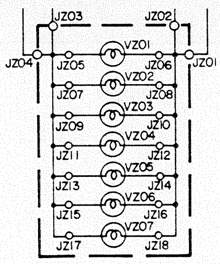

CAUTION:
REPLACE ONLY WITH
SAME TYPE FUSE
F801
3.15AT250V
F802
200MAT250V
F803
200MAT250V
Q801
C801
R801
C802
C803
Q803
B
E
C
R803
R802
R804
Q804
C806
C804
Q802
C805
J801
J802
J803
J804
J805
J806
J807
J808
J809
J810
J811

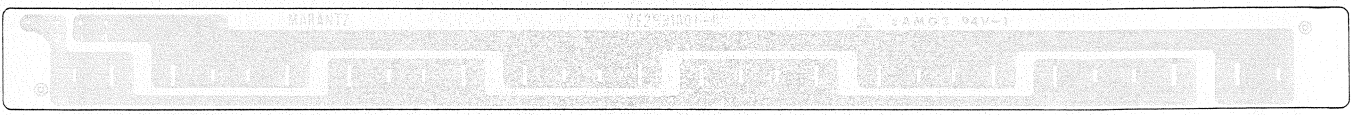
6.10 FUNCTION INDICATOR BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PY01


JYO1
JYO3
JYO2
FM
AM
QYO1
QYO2


EAMG3
MARANTZ
YH299104I-0
94V-1
QYOI
QYO3
QYO2
JYOI
JYO2
JYO4
JYO3

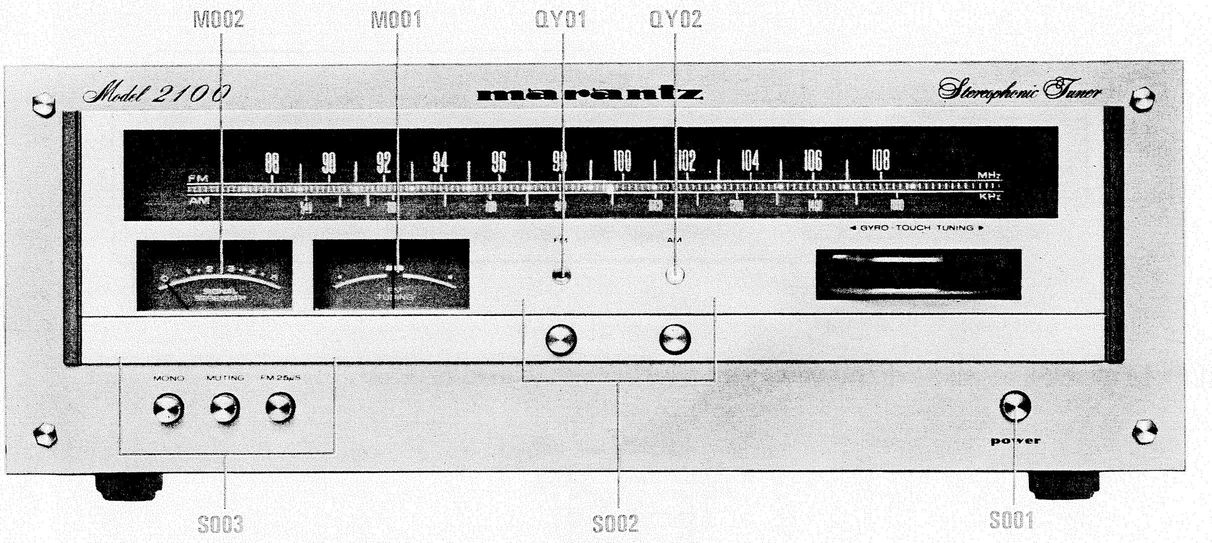
6.11 DIAL LAMP BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PZ01


JZO3
JZO2
JZO4
JZO1
VZO1
JZO5
JZO6
VZO2
JZO7
JZO8
VZO3
JZO9
JZ10
VZO4
JZ11
JZ12
VZO5
JZ13
JZ14
VZO6
JZ15
JZ16
VZO7
JZ17
JZ18

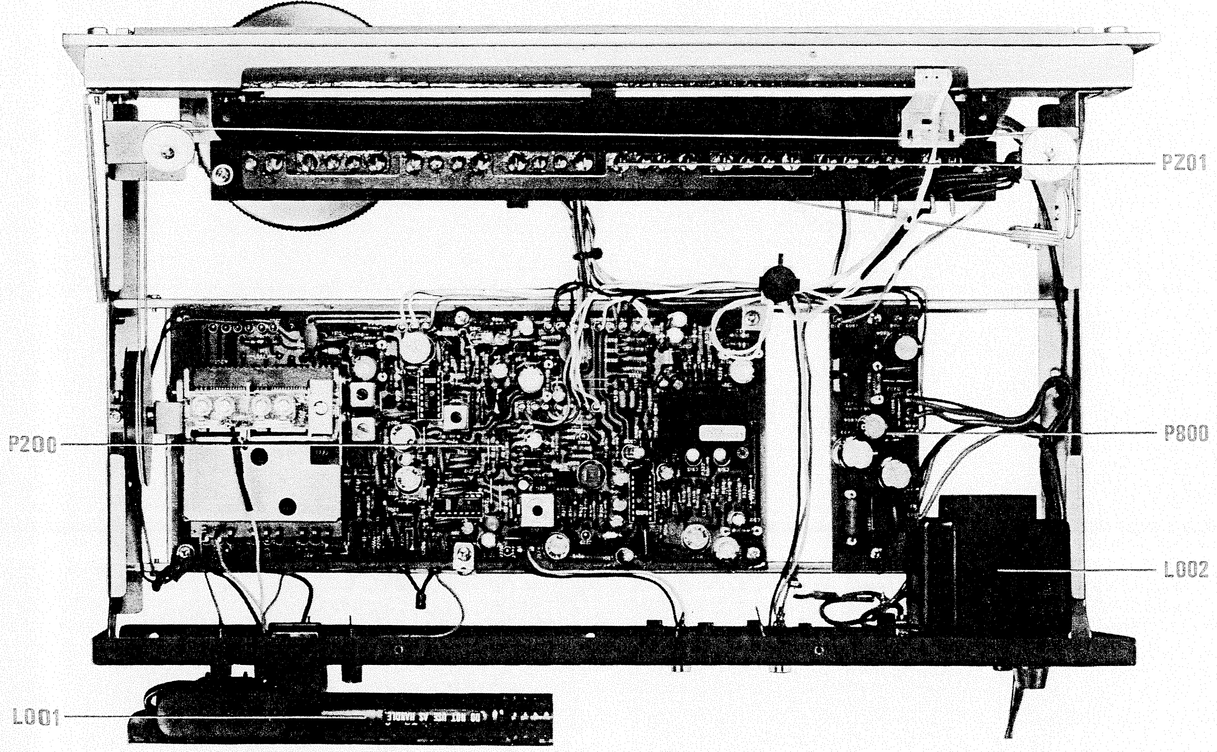

MARANTZ
YF299100I-0
EAMG3 94V-1

7. MAJOR COMPONENT LOCATIONS

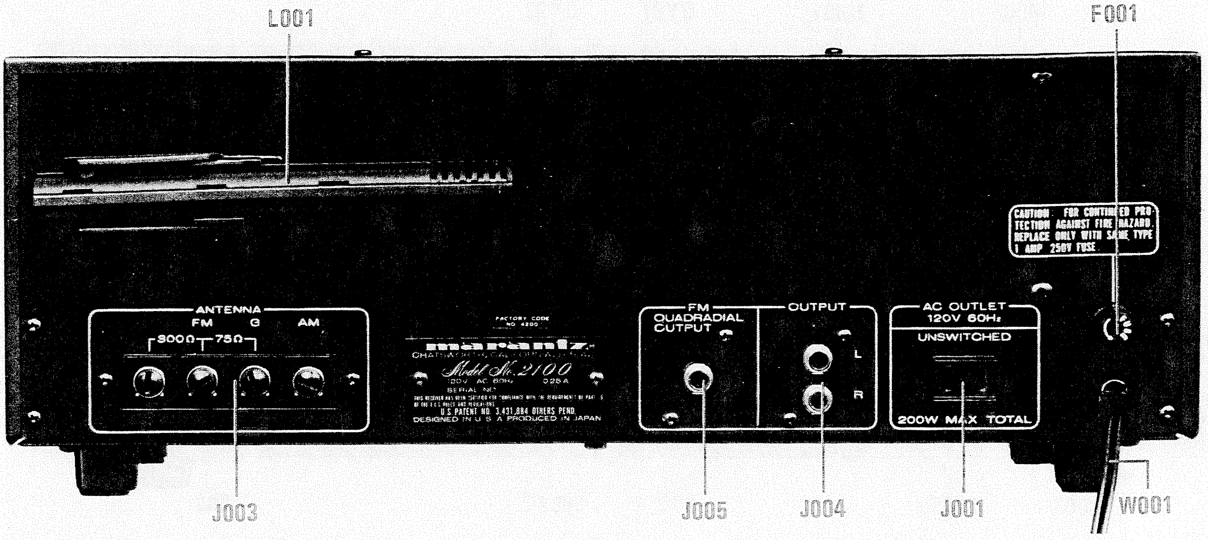
7.1 CABINET - FRONT VIEW - U.S.A. & CANADA


M002
M001
QY01
QY02
Model 2100
marantz
Stereophonic Tuner
88
90
92
94
96
98
100
102
104
106
108
FM
AM
MHz
KHz
FM
AM
GYRO - TOUCH TUNING
MONO
MUTING
FM 25µS
power
S003
S002
S001

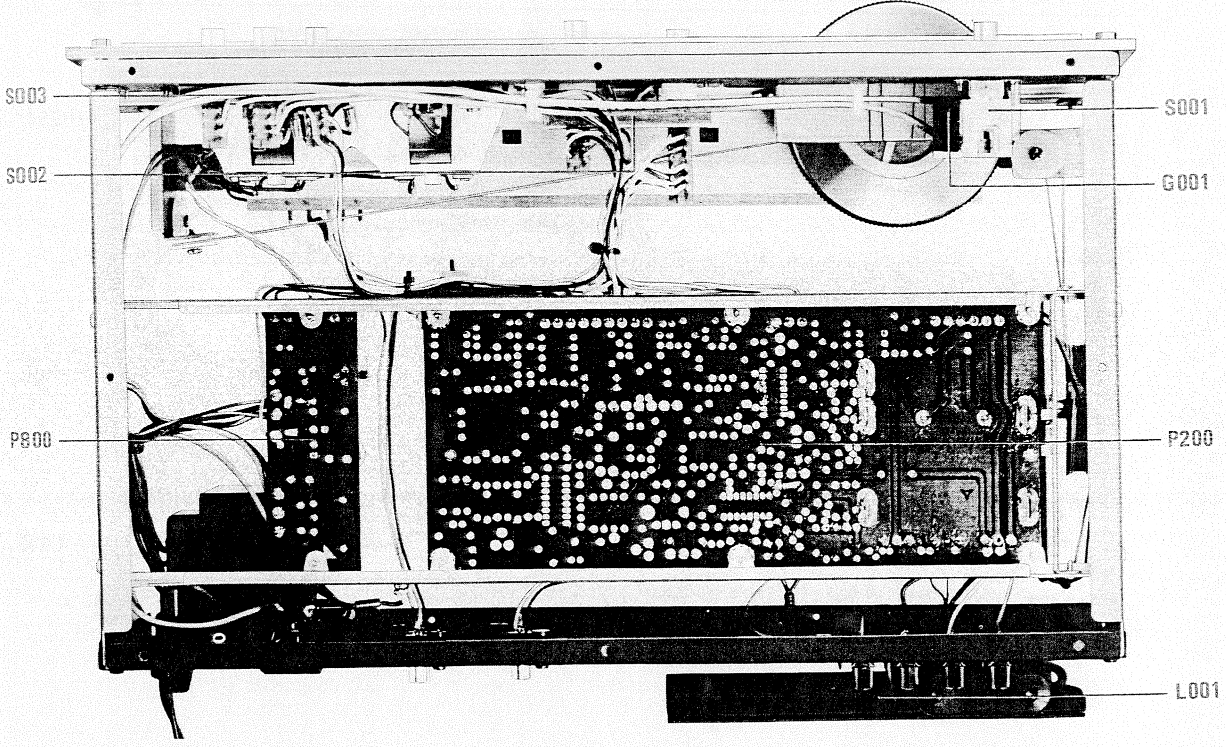
7.2 CHASSIS - TOP VIEW - U.S.A. & CANADA


PZ01
P200
P800
L002
L001

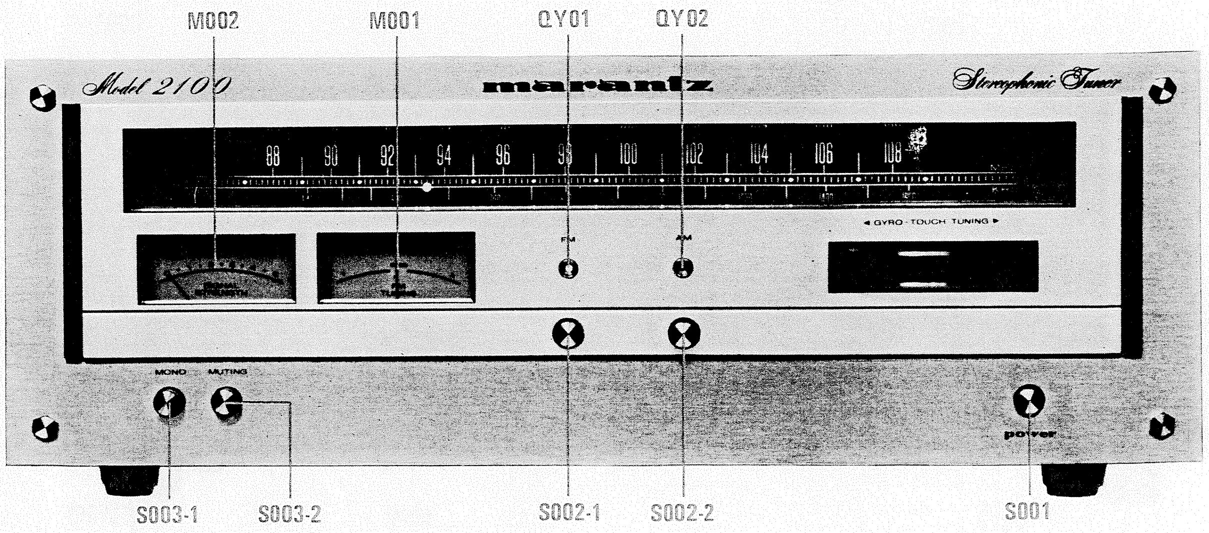
7.3 CABINET - REAR VIEW - U.S.A. & CANADA


L001
F001
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 1 AMP 250V FUSE.
ANTENNA
FM
G
AM
300Ω
75Ω
marantz
Model No. 2100
FM QUADRADIAL OUTPUT
OUTPUT
L
R
AC OUTLET 120V 60Hz
UNSWITCHED
200W MAX TOTAL
J003
J005
J004
J001
W001

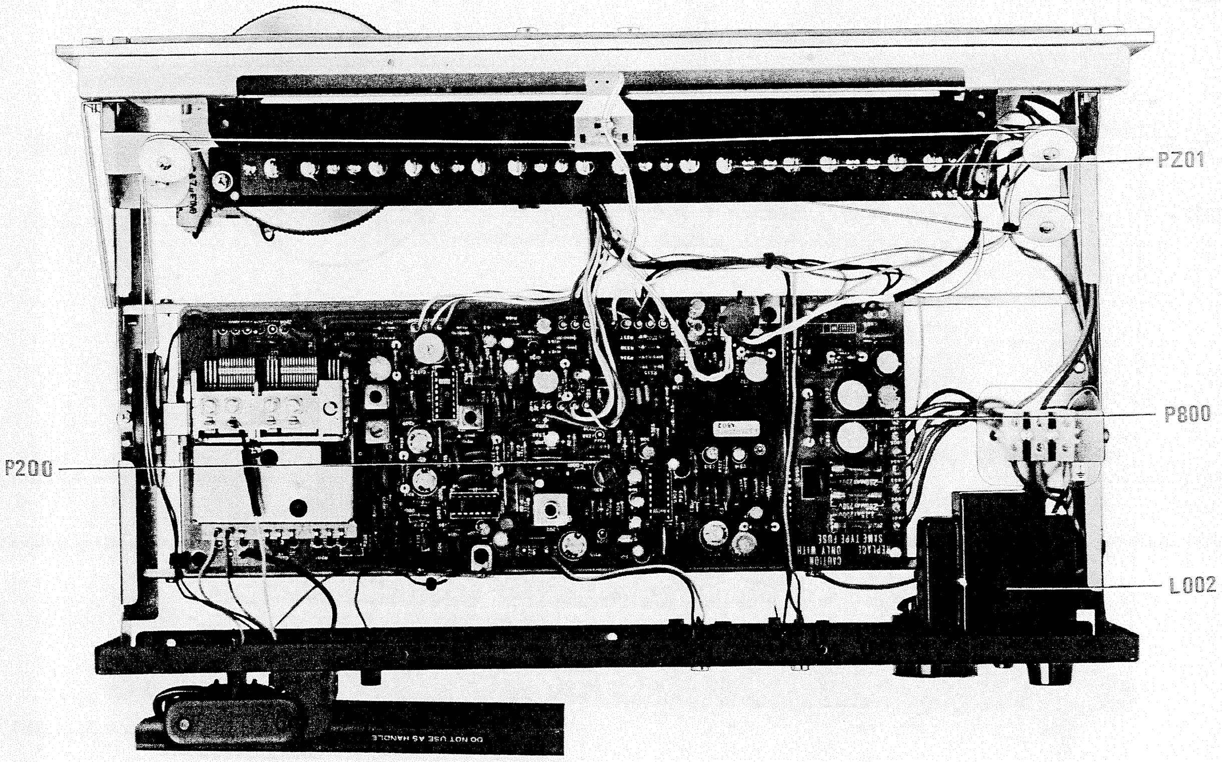
7.4 CHASSIS - BOTTOM VIEW - U.S.A. & CANADA


S003
S002
S001
G001
P800
P200
L001

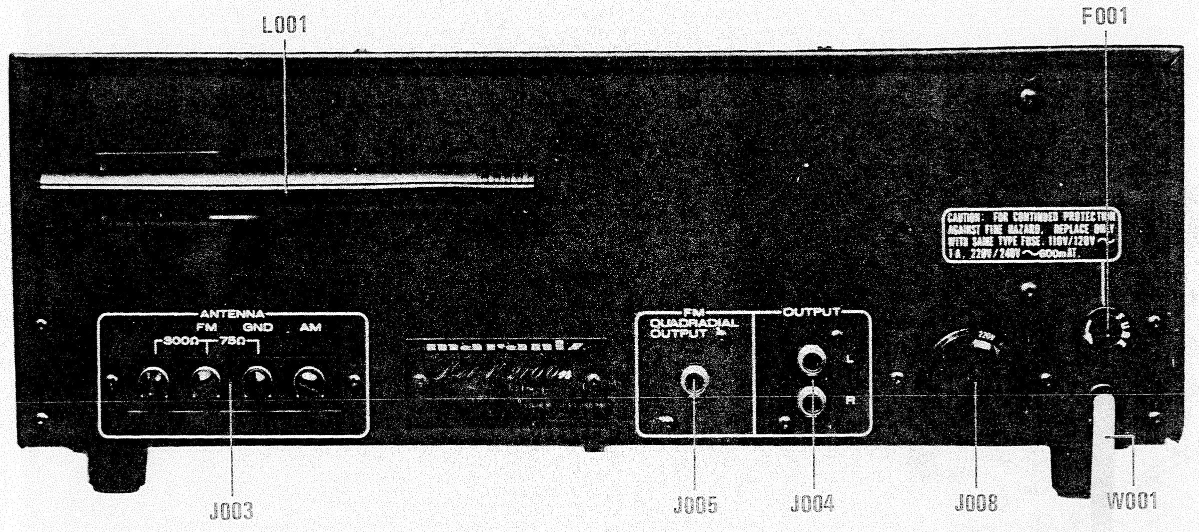
7.5 CABINET - FRONT VIEW - EUROPE


M002
M001
QY01
QY02
Model 2100
marantz
Stereophonic Tuner
88
90
92
94
96
98
100
102
104
106
108
FM
AM
◄ GYRO - TOUCH TUNING ►
MONO
MUTING
power
S003-1
S003-2
S002-1
S002-2
S001

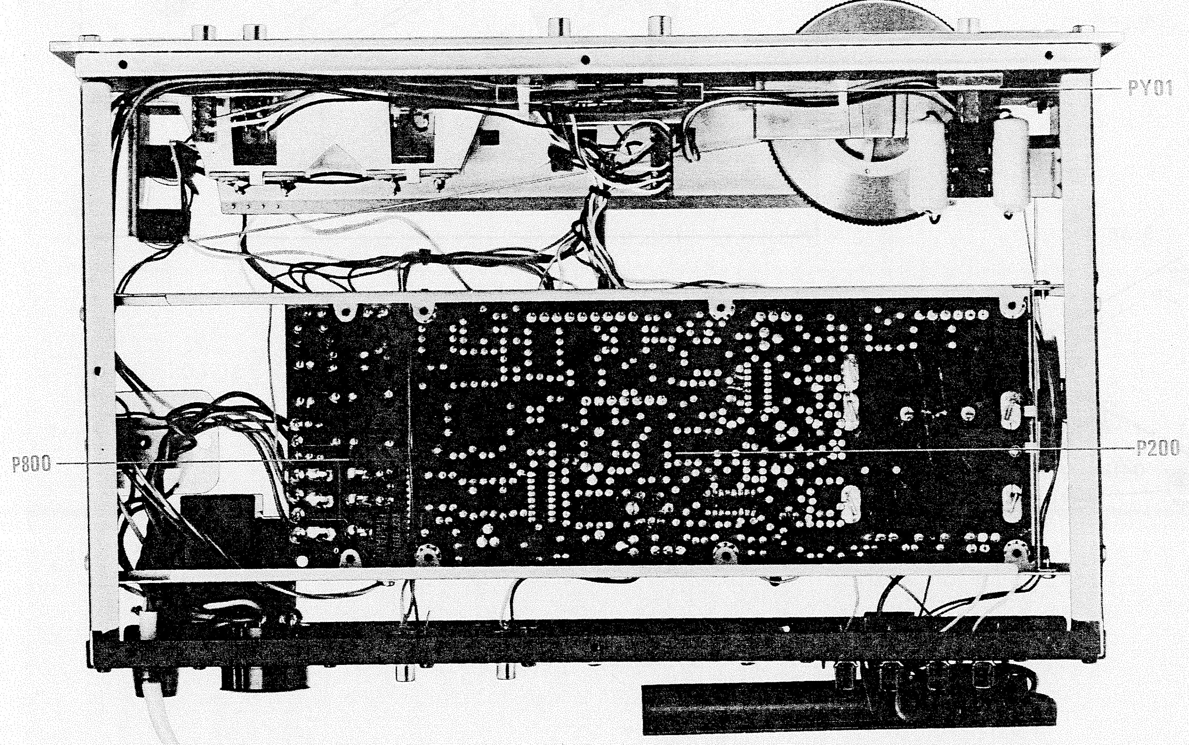
7.6 CHASSIS - TOP VIEW - EUROPE


PZ01
P800
P200
L002
CAUTION
REPLACE ONLY WITH
SAME TYPE FUSE
DO NOT USE AS HANDLE

7.7 CABINET - REAR VIEW - EUROPE

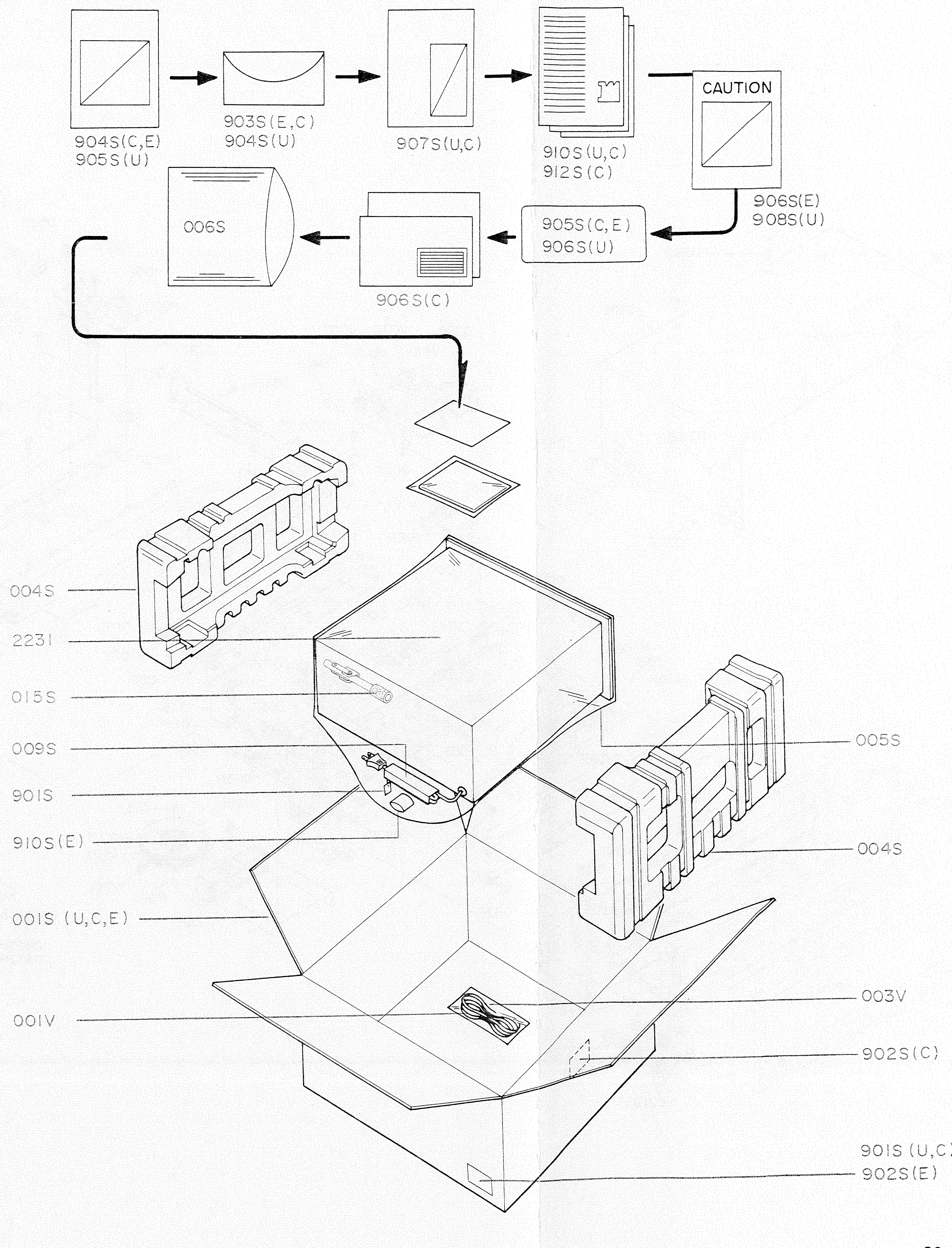

L001
F001
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACE ONLY WITH SAME TYPE FUSE. 110V/120V ~ 1A. 220V/240V ~ 600mAT.
ANTENNA
FM
GND
AM
300Ω
75Ω
marantz
FM QUADRADIAL OUTPUT
OUTPUT
L
R
220V
FUSE
J003
J005
J004
J008
W001

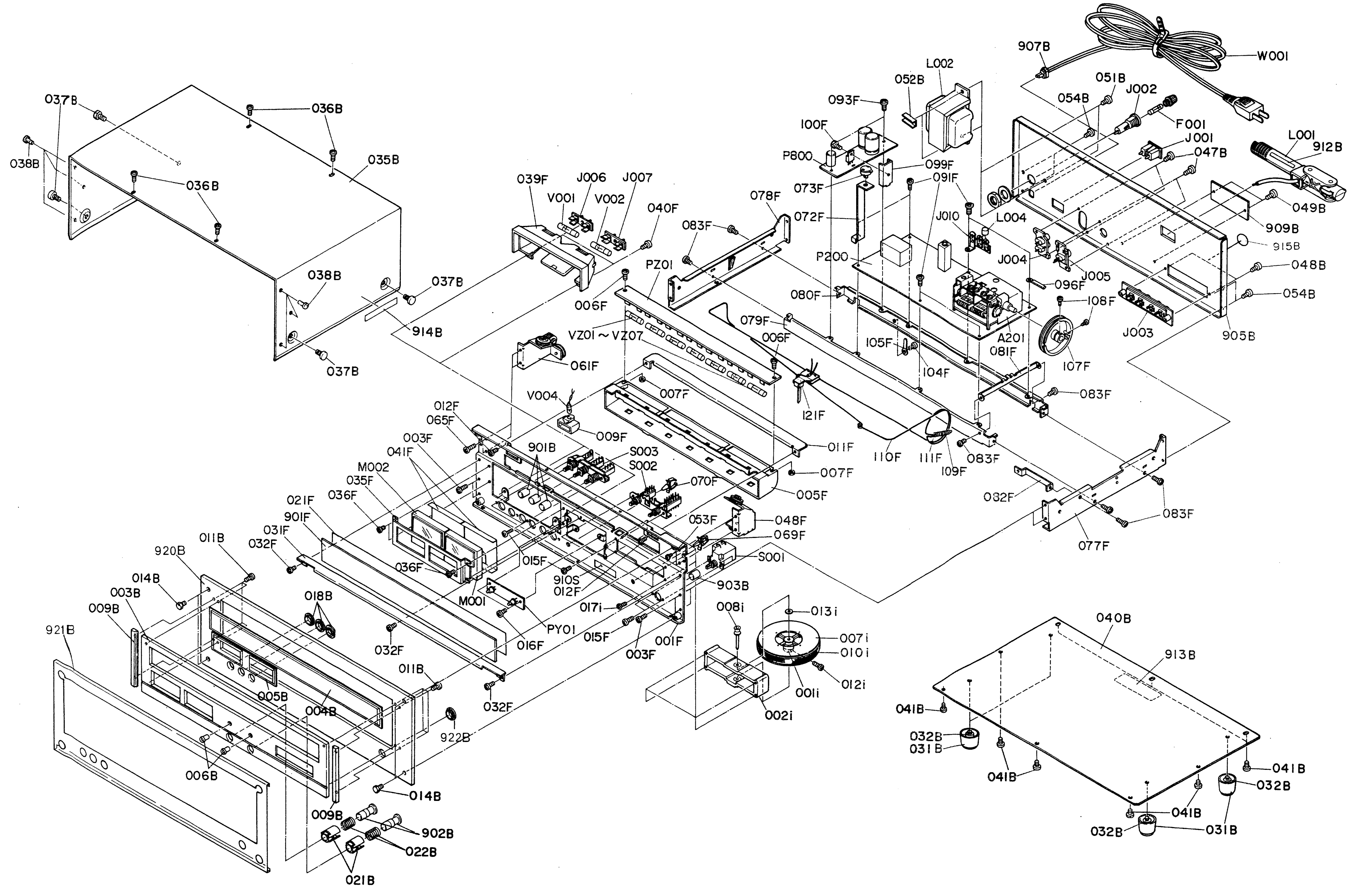
7.8 CHASSIS - BOTTOM VIEW - EUROPE


PY01
P800
P200

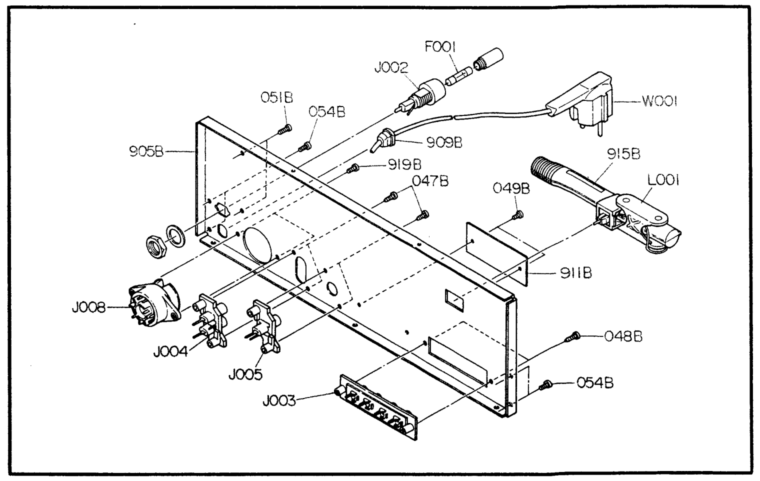
8. EXPLODED VIEWS

8.1 PACKING MATERIAL EXPLODED VIEW


904S(C,E)
905S(U)
903S(E,C)
904S(U)
907S(U,C)
910S(U,C)
912S(C)
CAUTION
906S(E)
908S(U)
006S
906S(C)
905S(C,E)
906S(U)
004S
2231
015S
009S
901S
910S(E)
001S (U,C,E)
001V
005S
004S
003V
902S(C)
901S (U,C)
902S(E)


037B
038B
036B
036B
035B
038B
037B
037B
914B
039F
J006
J007
V001
V002
040F
006F
PZ01
VZ01 ~ VZ07
083F
078F
093F
L002
052B
100F
P800
099F
073F
091F
072F
J010
L004
P200
080F
079F
006F
061F
V004
009F
007F
011F
007F
005F
121F
105F
104F
A201
081F
107F
096F
108F
J004
J005
J003
905B
048B
054B
915B
909B
049B
912B
L001
047B
J001
F001
J002
051B
054B
907B
W001
083F
110F
111F
109F
083F
082F
077F
083F
012F
065F
003F
041F
M002
035F
036F
021F
901F
031F
032F
011B
920B
014B
003B
009B
921B
018B
036F
901B
S003
S002
070F
048F
069F
S001
053F
903B
015F
910S
012F
M001
016F
PY01
017i
015F
001F
003F
008i
013i
007i
010i
012i
001i
002i
032F
011B
005B
004B
922B
032F
006B
014B
009B
902B
022B
021B
040B
913B
041B
032B
031B
041B
041B
032B
041B
032B
031B

EUROPEAN MODEL


F001
J002
W001
051B
054B
905B
909B
919B
915B
047B
049B
L001
911B
J008
J004
J005
J003
048B
054B

9. PARTS LIST

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY U	Q'TY C	Q'TY E	PART NO.	DESCRIPTION
A	1	1		2991063400	Front Panel Assembly
A1			1	2991063410	Front Panel Assembly
003B	1	1	1	2991063024	Escutcheon
004B	1	1	1	2991158110	Window
005B	1	1	1	2991158120	Window
006B	2	2	2	2979259022	Bushing
009B	2	2	2	2965063050	Escutcheon
011B	9	9	9	51480306A9	F. Washer Screw
021B	2	2	2	2979259012	Bushing
920B			1	2991063013	Escutcheon
920B	1	1		2991063110	Escutcheon
921B			1	2991053010	Cover
921B	1	1		2991053110	Cover
922B	4	4	3	2978259010	Bushing
B	1	1	1	2219273400	Flywheel Assembly
001I	1	1	1	2219273010	Flywheel
007I	2	2	2	2219063030	Escutcheon
010I	1	1	1	2219353010	Ring
0121	1	1	1	51820206B0	P.H.M. Screw, P2x6
C	1	1	1	2991159400	Drum Assembly
107F	1	1	1	2991159010	Drum
108F	2	2	2	51064019A0	P.H.M. Screw, P4x19
109F	1	1	1	71101569M0	Spring
					MECHANICAL PARTS
P208	12	12	12	2933118020	Spacer
P211	13	13	13	75061251P0	Jumper Wire
P808	5	5	5	2933118020	Spacer
001F	1	1	1	2991160015	Bracket
001S	1	1	1	2991801010	Packing Case
001V	1	1	1	ZA02000070	External Antenna, FM
002I	1	1	1	2991104500	Retainer
002V	1	1	1	ZD00150160	Connective Cord
003F	4	4	4	51280306B0	B.H. Tapped Screw, B3x6ST
003V	1	1	1	9013025010	Polyethylene Bag, Accessories
004S	2	2	2	2970809010	Cushion
005B	1	1	1	2991158120	Window
005F	1	1	1	2991274013	Reflector
005S	1	1	1	9014335330	Polyethylene Bag, Set
006F	2	2	2	51480308A9	F. Washer Screw
006S	1	1	1	9013025010	Polyethylene Bag, Printed Matter
007F	2	2	2	53110303E9	Hexagon Nut
008I	1	1	1	2219112010	Shaft
009B	2	2	2	2965063050	Escutcheon
009F	1	1	1	2218274032	Reflector
009S	1	1	1	2864804010	Sleeve
011F	1	1	1	2991051012	Guide
012F	2	2	2	51042608A0	F.H.M. Screw, F2.6x8
013I	1	1	1	59031405G9	Washer
014B	4	4	4	52017069J0	H. Head Bolt
015F	6	6	6	51100306A9	B.H.M. Screw, B3x6
015S	1	1	1	2819056010	Buffer
016F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
017I	4	4	4	51470306A9	L. Washer Screw
021F	1	1	1	2991107010	Sheet

REF. DESIG.	Q'TY U	Q'TY C	Q'TY E	PART NO.	DESCRIPTION
022B	2	2	2	2979115012	Spring
031B	4	4	4	2932057010	Leg
031F	1	1	1	2991269015	Protector
032B	4	4	4	51570410S9	P. Tapped Screw, P4x10ST
032F	3	3	3	51280306B0	B.H. Tapped Screw, B3x6ST
035B	1	1	1	2970257012	Lid
035F	1	1	1	2991160053	Bracket
036B	4	4	4	51280306U0	B.H. Tapped Screw, B3x6ST
036F	4	4	4	51280306B0	B.H. Tapped Screw, B3x6ST
037B	4	4	4	51480406S9	F. Washer Screw
038B	6	6	6	2979259030	Bushing
039F	1	1	1	2218274022	Reflector
040B	1	1	1	2978257023	Lid
040F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
041B	8	8	8	51280408U0	B.H. Tapped Screw, B4x8ST
041F	1	1	1	2991107020	Sheet
042F	1	1	1	2991107020	Sheet
047B	4	4	4	51280308U0	B.H. Tapped Screw, B3x8ST
048B	2	2	2	51280308U0	B.H. Tapped Screw, B3x8ST
048F	1	1	1	2991262503	Pulley
049B	2	2	2	51280306U0	B.H. Tapped Screw, B3x6ST
051B	2	2	2	51100408S9	B.H.M. Screw, B4x8
052B	2	2	2	2922005010	Clamper
053F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
054B	4	4	4	51280306U0	B.H. Tapped Screw, B3x6ST
061F	1	1	1	2991262512	Pulley
065F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
069F	1	1	1	2886005060	Clamper
070F	1	1	1	2886005050	Clamper
072F	1	1	1	2991005010	Clamper
073F	1	1	1	2908259010	Bushing
077F	1	1	1	2991126014	Stay
078F	1	1	1	2991126024	Stay
079F	1	1	1	2991126033	Stay
080F	1	1	1	2991126043	Stay
081F	1	1	1	2991126050	Stay
082F	1	1	1	2991126060	Stay
083F	8	8	8	51280306B0	B.H. Tapped Screw, B3x6ST
091F	6	6	6	51280306B0	B.H. Tapped Screw, B3x6ST
093F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
096F	1	1	1	1382005030	Clamper
099F	1	1	1	2915267020	Heatsink
100F	1	1	1	51100306A9	B.H.M. Screw, B3x6
104F	1	1	1	51280306B0	B.H. Tapped Screw, B3x6ST
105F	1	1	1	62030039W0	Lug
109F	1	1	1	71101569M0	Spring
110F	2	2	2	72071605A0	String
111F	2	2	2	56382540G0	Eyelet
121F	1	1	1	2991103500	Pointer
135F	1	1	1	2991109010	Shield
136F	1	1	1	2991053110	Cover
901B	3	3	4	2970154032	Knob
901F			1	2991160090	Bracket
901F	1	1	1	2991302013	Dial
901S	3			9522815010	Serial No. Card
901S		3		9523015120	Serial No. Card
901S			1	9560000042	Hang Tag
902B	2	2	2	2979154022	Knob
902F			1	51280306B0	B.H. Tapped Screw, B3x6ST
902S		2		9510901020	Label
902S			3	9523015110	Serial No. Card
903B	1	1		2963154030	Knob
903S			1	2818813010	Envelope

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY U	Q'TY C	Q'TY E	PART NO.	DESCRIPTION
903S		1		2918813012	Envelope
904F			1	4113120010	Insulator
904S	1			2577813010	Envelope
904S		1	1	2818851120	Instructions, Important
905B	1	1		2991160213	Bracket
905B			1	2991160223	Bracket
905F			2	51280314B0	B.H. Tapped Screw, B3x14ST
905S	1			2577851020	Instructions, Important
905S		1	1	9630000180	Guarantee Card
906S	1			2577854012	Guarantee Card
906S			1	2818851140	Instructions, Caution
906S		1		9650000050	Service Station Card
907B	1	1		1455259030	Bushing
907S	1			2818854023	Guarantee Card
907S		1		2818854042	Guarantee Card
908S	1			2818851040	Instructions, Caution
908S		1		2818854140	Guarantee Card
908S			1	2991851310	Instructions, Set
909B			1	1455259050	Bushing
909B	1			2991265010	Indicator
909B		1		2991265020	Indicator
910S			1	2731821010	Silicagel
910S	1			2991851010	Instructions, Set
910S		1		2991851310	Instructions, Set
911B			1	2991265082	Indicator
912B	1			2506265060	Indicator
912B		1		2911861170	Label
912S		1		2886851100	Instructions, Set
913B	1			2578861010	Label
913B		1		2911861110	Label
914B		1		2911861140	Label
914B	1			2932861010	Label
915B			1	2506265060	Indicator
915B		1		9510911010	Label
915B	1			9510911020	Label
916B			1	2578861010	Label
916B	1			9511101030	Label
917B		1		2911861190	Label
917B			1	2932861010	Label
917B	1			2991861010	Label
918B		1		2911861290	Label
919B			2	51100308S9	B.H.M. Screw, B3x8
923B			1	2882861020	Label
					ELECTRICAL PARTS
JY01	1	1	1	YP10001130	Plug
JY02	1	1	1	YP10001130	Plug
JY03	1	1	1	YP10001130	Plug
PY01	1	1	1	YH29910410	P.W. Board, Function Indicator
	1	1	1	ZZ29910050	P.W. Board Assembly
QY01	1	1	1	HI10004030	L.E.D., FM
QY02	1	1	1	HI10004030	L.E.D., AM
JZ01	1	1	1	YP10001130	Plug
JZ02	1	1	1	YP10001130	Plug
JZ03	1	1	1	YP10001130	Plug
JZ04	1	1	1	YP10001130	Plug
JZ05	1	1	1	YJ08000170	Jack, Lamp Holder
JZ06	1	1	1	YJ08000170	Jack, Lamp Holder
JZ07	1	1	1	YJ08000170	Jack, Lamp Holder
JZ08	1	1	1	YJ08000170	Jack, Lamp Holder
JZ09	1	1	1	YJ08000170	Jack, Lamp Holder
JZ10	1	1	1	YJ08000170	Jack, Lamp Holder
JZ11	1	1	1	YJ08000170	Jack, Lamp Holder
JZ12	1	1	1	YJ08000170	Jack, Lamp Holder
JZ13	1	1	1	YJ08000170	Jack, Lamp Holder
JZ14	1	1	1	YJ08000170	Jack, Lamp Holder
JZ15	1	1	1	YJ08000170	Jack, Lamp Holder
JZ16	1	1	1	YJ08000170	Jack, Lamp Holder
JZ17	1	1	1	YJ08000170	Jack, Lamp Holder
JZ18	1	1	1	YJ08000170	Jack, Lamp Holder
PZ01	1	1	1	YF29910010	P.W. Board, Dial Lamp
	1	1	1	ZZ29910040	P.W. Board Assembly
VZ01	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ02	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ03	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ04	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ05	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ06	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ07	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
C001	1	1	1	EA47601090	Cap., Elect., 47μF, 10V
C002	1	1		DF15222050	Cap., Film, 2200pF
C002			1	DO07473540	Cap., Oil-Paper, 0.047μF
C003	1	1		DF15222050	Cap., Film, 2200pF
C003			1	DO07473540	Cap., Oil-Paper, 0.047μF
F001			1	FS10050800	Fuse, 250V 500mA, SEMKO
F001	1	1		FS10100080	Fuse, 250V 1A, UL
G001	1			BF10400040	Printed Comp.
G001		1		BF33300020	Printed Comp.
J001	1	1		YJ04000560	Jack, AC Outlet
J002	1	1		YJ08000120	Jack, Fuse Holder
J002			1	YJ08000220	Jack, Fuse Holder
J003	1	1	1	YT01040180	Terminal, Antenna
J004	1	1	1	YT02020140	Terminal, Output
J005	1	1	1	YT02010130	Terminal, Quadradial Output
J006	1	1	1	YJ08000190	Jack, Meter Lamp Holder
J007	1	1	1	YJ08000190	Jack, Meter Lamp Holder
J008			1	BY03110010	Plug, Voltage Conversion
J009			1	YL09030010	Terminal, 3P
J010	1	1	1	YL01030230	Terminal, 3P Lug
L001	1	1	1	LF11200520	Antenna Coil, AM
L002	1	1		TS16015050	Power Transformer
L002			1	TS16015060	Power Transformer
L003	1	1	1	LC13320020	Choke Coil, 3.3μH
L004	1	1	1	LC11540020	Choke Coil, 150μH
M001	1	1	1	IM11055010	Meter, FM Tuning
M002	1	1	1	IM11055020	Meter, Signal Strength
R001	1	1		GT05225120	Res., Fixed, 2.2MΩ ±5%, ½W
S001	1	1		SP01010180	Pushswitch, Power
S001			1	SP04010250	Pushswitch, Power
S002	1	1	1	SP04020190	Pushswitch, Selector
S003			1	SP02020260	Pushswitch, Mono/Muting
S003	1	1		SP02030070	Pushswitch, Mono/Muting/FM 25μS
V001	1	1	1	IN10080070	Lamp, Meter, 8V 200mA
V002	1	1	1	IN10080070	Lamp, Meter, 8V 200mA
V003	1	1	1	IN10080410	Lamp, 8V 50mA
V004	1	1	1	IN10080340	Lamp, Stereo, 8V 60mA
W001			1	YC01900030	AC Power Cord
W001	1	1		YC02400220	AC Power Cord
C101	1	1	1	DD16120020	Cap., Ceramic, 12pF
C102	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C103	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C104	1	1	1	DD11020010	Cap., Ceramic, 2pF

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
C105	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C106	1	1	1	DD16150040	Cap., Ceramic, 15pF
C107	1	1	1	DD11020010	Cap., Ceramic, 2pF
C108	1	1	1	DD12050010	Cap., Ceramic, 5pF
C109	1	1	1	DD16101010	Cap., Ceramic, 100pF
C110	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C111	1	1	1	DD16101010	Cap., Ceramic, 100pF
C112	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C113	1	1	1	DD15150020	Cap., Ceramic, 15pF
C114	1	1	1	DD10050030	Cap., Ceramic, 5pF
C115	1	1	1	DD12050010	Cap., Ceramic, 5pF
C116	1	1	1	DD16330020	Cap., Ceramic, 33pF
C117	1	1	1	DD12100060	Cap., Ceramic, 10pF
C118	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C119	1	1	1	DD11020010	Cap., Ceramic, 2pF
C120	1	1	1	CA32400080	Cap., Variable
C121	1	1	1	CT14200010	Cap., Trimmer
C151	1	1	1	DK17103010	Cap., Ceramic, 0.01μF
C152	1	1	1	DK17103010	Cap., Ceramic, 0.01μF
C153	1	1	1	DK17102010	Cap., Ceramic, 0.001μF
C154	1	1	1	EA10701690	Cap., Elect., 100μF, 16V
C155	1	1	1	DK18403020	Cap., Ceramic, 0.04μF
C156	1	1	1	DF65391010	Cap., Film, 390pF
C157	1	1	1	DD16150010	Cap., Ceramic, 15pF
C158	1	1	1	DK18103010	Cap., Ceramic, 0.01μF
C159	1	1	1	DK17103010	Cap., Ceramic, 0.01μF
C160	1	1	1	DD16820010	Cap., Ceramic, 82pF
C161	1	1	1	DK17103010	Cap., Ceramic, 0.01μF
C162	1	1	1	DK18403020	Cap., Ceramic, 0.04μF
C163	1	1	1	EA10505090	Cap., Elect., 1μF, 50V
C164	1	1	1	EA22601690	Cap., Elect., 22μF, 16V
C165	1	1	1	EA47503590	Cap., Elect., 4.7μF, 35V
C166	1	1	1	DK17102010	Cap., Ceramic, 0.001μF
C167	1	1	1	DK18103010	Cap., Ceramic, 0.01μF
C168	1	1	1	DK16682010	Cap., Ceramic, 0.0068μF
C169	1	1	1	DK18403020	Cap., Ceramic, 0.04μF
C170	1	1	1	EA10701690	Cap., Elect., 100μF, 16V
C171	1	1	1	DF16104010	Cap., Film, 0.1μF
C172	1	1	1	EE47502510	Cap., Elect., 4.7μF, 25V
F151	1	1	1	FF10045160	Ceramic Filter, AM, SFD455D
J101	1	1	1	YP10001510	Plug
J102	1	1	1	YP10001510	Plug
J103	1	1	1	YP10001510	Plug
J105	1	1	1	YP10001510	Plug
J107	1	1	1	YP10001510	Plug
J109	1	1	1	YP10001510	Plug
J110	1	1	1	YP10001510	Plug
J111	1	1	1	YP10001510	Plug
L105	1	1	1	LC12220010	Choke Coil
L106	1	1	1	LI10239010	IFT
L152	1	1	1	LC13320020	Choke Coil, 3.3μH
L153	1	1	1	LC13320020	Choke Coil, 3.3μH
L154	1	1	1	LO10010480	OSC Coil, AM
L155	1	1	1	LI10015010	IFT, AM
L156	1	1	1	LI10015060	IFT, AM
P100	1	1	1	YD29910010	P.W. Board, Front End
A201	1	1	1	AV01202060	Front End Assembly
Q101	1	1	1	HF400451B0	FET, 3SK45 B
Q102	1	1	1	HT305352B0	Transistor, 2SC535 B or C
Q103	1	1	1	HT313422B0	Transistor, 2SC1342 B or C
Q151	1	1	1	HC10019010	IC, HA1197
Q152	1	1	1	HT313272A0	Transistor, 2SC1327 S or T
Q153	1	1	1	HV00006120	Varistor, MV-203

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
R101	1	1	1	GD05105140	Res., Fixed, 1MΩ ±5%, ¼W
R102	1	1	1	GD05101140	Res., Fixed, 100Ω ±5%, ¼W
R103	1	1	1	GD05101140	Res., Fixed, 100Ω ±5%, ¼W
R104	1	1	1	GD05101140	Res., Fixed, 100Ω ±5%, ¼W
R105	1	1	1	GD05223140	Res., Fixed, 22kΩ ±5%, ¼W
R106	1	1	1	GD05472140	Res., Fixed, 4.7kΩ ±5%, ¼W
R107	1	1	1	GD05102140	Res., Fixed, 1kΩ ±5%, ¼W
R108	1	1	1	GD05103140	Res., Fixed, 10kΩ ±5%, ¼W
R109	1	1	1	GD05332140	Res., Fixed, 3.3kΩ ±5%, ¼W
R110	1	1	1	GD05103140	Res., Fixed, 10kΩ ±5%, ¼W
R111	1	1	1	GD05101140	Res., Fixed, 100Ω ±5%, ¼W
R151	1	1	1	RT05201140	Res., Fixed, 200Ω ±5%, ¼W
R152	1	1	1	RT05152140	Res., Fixed, 1.5kΩ ±5%, ¼W
R153	1	1	1	RT05202140	Res., Fixed, 2kΩ ±5%, ¼W
R154	1	1	1	RT05152140	Res., Fixed, 1.5kΩ ±5%, ¼W
R155	1	1	1	RT05151140	Res., Fixed, 150Ω ±5%, ¼W
R156	1	1	1	RA05020200	Res., Semifixed, 5kΩ
R157	1	1	1	RT05391140	Res., Fixed, 390Ω ±5%, ¼W
R158	1	1	1	RT05124140	Res., Fixed, 120kΩ±5%, ¼W
R159	1	1	1	RT05104140	Res., Fixed, 100kΩ±5%, ¼W
R160	1	1	1	RT05103140	Res., Fixed, 10kΩ ±5%, ¼W
R161	1	1	1	RT05103140	Res., Fixed, 10kΩ ±5%, ¼W
R162	1	1	1	RT05102140	Res., Fixed, 1kΩ ±5%, ¼W
R163	1	1	1	RT05301140	Res., Fixed, 300Ω ±5%, ¼W
R164	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R165	1	1	1	RT05104140	Res., Fixed, 100kΩ±5%, ¼W
R166	1	1	1	RT05152140	Res., Fixed, 1.5kΩ ±5%, ¼W
R167	1	1	1	RT05242140	Res., Fixed, 2.4kΩ ±5%, ¼W
R169	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R170	1	1	1	RT05101140	Res., Fixed, 100Ω ±5%, ¼W
C201	1	1	1	DD15300010	Cap., Ceramic, 30pF
C202	1	1	1	DK17103010	Cap., Ceramic, 0.01μF
C203	1	1	1	DK17103010	Cap., Ceramic, 0.01μF
C204	1	1	1	DK17103010	Cap., Ceramic, 0.01μF
C205	1	1	1	DK18403020	Cap., Ceramic, 0.04μF
C206	1	1	1	DK18403020	Cap., Ceramic, 0.04μF
C207	1	1	1	DK18403020	Cap., Ceramic, 0.04μF
C208	1	1	1	EA47503590	Cap., Elect., 4.7μF, 35V
C209	1	1	1	DD15400040	Cap., Ceramic, 40pF
C210	1	1	1	EA22601690	Cap., Elect., 22μF, 16V
C211	1	1	1	EA47405010	Cap., Elect., 0.47μF, 50V
C212	1	1	1	DK18403010	Cap., Ceramic, 0.04μF
C213	1	1	1	DK18403010	Cap., Ceramic, 0.04μF
C214	1	1	1	DK18403010	Cap., Ceramic, 0.04μF
C215	1	1	1	DK18403010	Cap., Ceramic, 0.04μF
C216	1	1	1	DK18403010	Cap., Ceramic, 0.04μF
C217	1	1	1	EA10505090	Cap., Elect., 1μF, 50V
C218	1	1	1	EA10505090	Cap., Elect., 1μF, 50V
F201	1	1	1	FF11070050	Ceramic Filter, SFE10.7MD1
F202	1	1	1	FF11070050	Ceramic Filter, SFE10.7MD1
F203	1	1	1	FF11070050	Ceramic Filter, SFE10.7MD1
J201 ~ J229	29	29	29	YP10001130	Plug
J231	1	1	1	YP10001130	Plug
L202	1	1	1	LI14019010	IFT, FM
L203	1	1	1	LC11830010	Choke Coil, 18μH
P200	1	1	1	YD22042012	P.W. Board, Tuner
	1	1		ZZ29912010	P.W. Board Assembly
			1	ZZ29918010	P.W. Board Assembly
Q201	1	1	1	HT310471C0	Transistor, 2SC1047 C
Q202	1	1	1	HC10021010	IC, HA1137W

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
Q203	1	1	1	HD20011050	Diode, 1S1555
Q204	1	1	1	HD20011050	Diode, 1S1555
Q205	1	1	1	HD20011050	Diode 1S1555
Q206	1	1	1	HT308281D0	Transistor, 2SC828 S
R201	1	1	1	RT05151140	Res., Fixed, 150Ω ±5%, ¼W
R202	1	1	1	RT05331140	Res., Fixed, 330Ω ±5%, ¼W
R203	1	1	1	RT05153140	Res., Fixed, 15kΩ ±5%, ¼W
R204	1	1	1	RT05202140	Res., Fixed, 2kΩ ±5%, ¼W
R205	1	1	1	RT05331140	Res., Fixed, 330Ω ±5%, ¼W
R206	1	1	1	RT05102140	Res., Fixed, 1kΩ ±5%, ¼W
R207	1	1	1	RT05101140	Res., Fixed, 100Ω ±5%, ¼W
R208	1	1	1	RT05334140	Res., Fixed, 330kΩ±5%, ¼W
R209	1	1	1	RA05030120	Res., Semifixed, 50kΩ (B)
R210	1	1	1	RT05103140	Res., Fixed, 10kΩ ±5%, ¼W
R211	1	1	1	RT05104140	Res., Fixed, 100kΩ±5%, ¼W
R212	1	1	1	RA01030250	Res., Semifixed, 10kΩ (B)
R213	1	1	1	RT05123140	Res., Fixed, 12kΩ ±5%, ¼W
R214	1	1	1	RT05331140	Res., Fixed, 330Ω ±5%, ¼W
R215	1	1	1	RA05030120	Res., Semifixed, 50kΩ (B)
R216	1	1	1	RT05562140	Res., Fixed, 5.6kΩ ±5%, ¼W
R217	1	1	1	RT05222140	Res., Fixed, 2.2kΩ ±5%, ¼W
R218	1	1	1	RT05222140	Res., Fixed, 2.2kΩ ±5%, ¼W
R219	1	1	1	RT05123140	Res., Fixed, 12kΩ ±5%, ¼W
R220	1	1	1	RT05391140	Res., Fixed, 390Ω ±5%, ¼W
R221	1	1	1	RT05223140	Res., Fixed, 22kΩ ±5%, ¼W
R222	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R223	1	1	1	RT05470140	Res., Fixed, 47Ω ±5%, ¼W
R224	1	1	1	RT05102140	Res., Fixed, 1kΩ ±5%, ¼W
C301	1	1	1	EA47503590	Cap., Elect., 4.7μF, 35V
C302	1	1	1	DF65361500	Cap., Film, 360pF
C303	1	1	1	EA10701690	Cap., Elect., 100μF, 16V
C304	1	1	1	EE33502510	Cap., Elect., 3.3μF, 25V
C305	1	1	1	EE10505010	Cap., Elect., 1μF, 50V
C306	1	1	1	EA10505090	Cap., Elect., 1μF, 50V
C307	1	1	1	EQ22405010	Cap., Elect., 0.22μF, 50V
C308	1	1	1	DF17473010	Cap., Film, 0.047μF
C309	1	1	1	DD15500050	Cap., Ceramic, 50pF
C310	1	1	1	DD15500050	Cap., Ceramic, 50pF
C311	1	1	1	EA10601690	Cap., Elect., 10μF, 16V
C312	1	1	1	EA10601690	Cap., Elect., 10μF, 16V
C313	1	1	1	EA22505090	Cap., Elect., 2.2μF, 50V
C314	1	1	1	EA22505090	Cap., Elect., 2.2μF, 50V
C315	1	1		DF15102050	Cap., Film, 1000pF
C315			1	DF15222050	Cap., Film, 2200pF
C316	1	1		DF15102050	Cap., Film, 1000pF
C316			1	DF15222050	Cap., Film, 2200pF
C317	1	1	1	EA47405010	Cap., Elect., 0.47μF, 50V
C318	1	1	1	EA47405010	Cap., Elect., 0.47μF, 50V
C319	1	1	1	EE47502510	Cap., Elect., 4.7μF, 25V
C320	1	1	1	EE47502510	Cap., Elect., 4.7μF, 25V
C321	1	1	1	EA10701690	Cap., Elect., 100μF, 16V
C322	1	1	1	EE10601640	Cap., Elect., 10μF, 16V
L301	1	1	1	LS35025010	MPX Coil
Q301	1	1	1	HT308281D0	Transistor, 2SC828 S
Q302	1	1	1	HC10020010	IC, HA1196
Q303	1	1	1	HT313441E0	Transistor, 2SC1344 E
Q304	1	1	1	HT313441E0	Transistor, 2SC1344 E
R301	1	1	1	RA01030310	Res., Semifixed, 10kΩ (B)
R302	1	1	1	RT05104140	Res., Fixed, 100kΩ±5%, ¼W
R303	1	1	1	RT05223140	Res., Fixed, 22kΩ ±5%, ¼W
R304	1	1	1	RT05102140	Res., Fixed, 1kΩ ±5%, ¼W
R305	1	1	1	RT05104140	Res., Fixed, 100kΩ±5%, ¼W
R306	1	1	1	RT05824140	Res., Fixed, 820kΩ±5%, ¼W

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
R307	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R308	1	1	1	RT05101140	Res., Fixed, 100Ω ±5%, ¼W
R309	1	1	1	RT05154140	Res., Fixed, 150kΩ±5%, ¼W
R310	1	1	1	RT05223140	Res., Fixed, 22kΩ ±5%, ¼W
R311	1	1	1	RT05272140	Res., Fixed, 2.7kΩ ±5%, ¼W
R312	1	1	1	RT05101140	Res., Fixed, 100Ω ±5%, ¼W
R313	1	1	1	RT05303140	Res., Fixed, 30kΩ ±5%, ¼W
R314	1	1	1	RT05303140	Res., Fixed, 30kΩ ±5%, ¼W
R315	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R316	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R317	1	1	1	RA05040080	Res., Semifixed, 500kΩ (B)
R318	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R319	1	1	1	RT05273140	Res., Fixed, 27kΩ ±5%, ¼W
R320	1	1	1	RT05273140	Res., Fixed, 27kΩ ±5%, ¼W
R321	1	1	1	RT05332140	Res., Fixed, 3.3kΩ ±5%, ¼W
R322	1	1	1	RT05332140	Res., Fixed, 3.3kΩ ±5%, ¼W
R323	1	1	1	RT05332140	Res., Fixed, 3.3kΩ ±5%, ¼W
R324	1	1	1	RT05332140	Res., Fixed, 3.3kΩ ±5%, ¼W
R325	1	1	1	RT05243140	Res., Fixed, 24kΩ ±5%, ¼W
R326	1	1	1	RT05243140	Res., Fixed, 24kΩ ±5%, ¼W
R327	1	1	1	RT05394140	Res., Fixed, 390kΩ±5%, ¼W
R328	1	1	1	RT05394140	Res., Fixed, 390kΩ±5%, ¼W
R329	1	1	1	RT05105140	Res., Fixed, 1MΩ ±5%, ¼W
R330	1	1	1	RT05105140	Res., Fixed, 1MΩ ±5%, ¼W
R331	1	1	1	RT05391140	Res., Fixed, 390Ω ±5%, ¼W
R332	1	1	1	RT05391140	Res., Fixed, 390Ω ±5%, ¼W
R333	1	1	1	RT05222140	Res., Fixed, 2.2kΩ ±5%, ¼W
R334	1	1	1	RT05222140	Res., Fixed, 2.2kΩ ±5%, ¼W
R335	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R336	1	1	1	RT05473140	Res., Fixed, 47kΩ ±5%, ¼W
R337	1	1	1	RT05101140	Res., Fixed, 100Ω ±5%, ¼W
R338	1	1	1	RT05101140	Res., Fixed, 100Ω ±5%, ¼W
R339	1	1	1	RT05101140	Res., Fixed, 100Ω ±5%, ¼W
R340	1	1	1	RT05201140	Res., Fixed, 200Ω ±5%, ¼W
C801	1	1	1	DK18103510	Cap., Ceramic, 0.01μF
C802	1	1	1	EA22705090	Cap., Elect., 220μF, 50V
C803	1	1	1	EA22705090	Cap., Elect., 220μF, 50V
C804	1	1	1	EA33701690	Cap., Elect., 330μF, 16V
C805	1	1	1	DK18103510	Cap., Ceramic, 0.01μF
C806	1	1	1	EA10701690	Cap., Elect., 100μF, 16V
F801			1	FS10315800	Fuse, 3.15AT, SEMKO
F802			1	FS10020800	Fuse, 200mAT, SEMKO
F803			1	FS10020800	Fuse, 200mAT, SEMKO
J801	1	1	1	YP10001130	Plug
J802	1	1	1	YP10001130	Plug
J803	1	1	1	YP10001130	Plug
J804	1	1	1	YP10001130	Plug
J805	1	1	1	YP10001130	Plug
J806	1	1	1	YP10001130	Plug
J807	1	1	1	YP10001130	Plug
J808	1	1	1	YP10001130	Plug
J809	1	1	1	YP10001130	Plug
J810	1	1	1	YP10001130	Plug
J811			1	YP10001130	Plug
J812			1	YJ08000200	Jack
J813			1	YJ08000200	Jack
J814			1	YJ08000200	Jack
J815			1	YJ08000200	Jack
J816			1	YJ08000200	Jack
J817			1	YJ08000200	Jack
P800	1	1		YK29910610	P.W. Board, Power Supply
	1	1		ZZ29910020	P.W. Board Assembly
P800			1	YK29910620	P.W. Board, Power Supply

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY U	Q'TY C	Q'TY E	PART NO.	DESCRIPTION
			1	ZZ29918030	P.W. Board Assembly
Q801	1	1	1	HD20011030	Diode, DS131-B
Q802	1	1	1	HD30021090	Zener, BZ-140
Q803	1	1	1	HT403131E0	Transistor, 2SD313E
Q804	1	1	1	HD20005010	Diode, W06B
R801	1	1	1	GJ05390020	Res., Fixed, 39Ω ±5%, 2W
R802	1	1	1	RT05332140	Res., Fixed, 3.3kΩ ±5%, ¼W
R803	1	1	1	RT05100140	Res. Fixed, 10Ω ±5%, ¼W
R804	1	1	1	RT05681140	Res., Fixed, 680Ω ±5%, ¼W

10. TECHNICAL SPECIFICATIONS

FM TUNER SECTION:

Sensitivity	
IHF Usable	10.3 dBf (1.8 µV)
IHF 50 dB Quieting (Mono)	13.2 dBf (2.5 µV)
(Stereo)	37.3 dBf (40 µV)
DIN Sensitivity (Mono, 26 dB S/N, 300 ohms input)	1.6 µV
(Stereo, 46 dB S/N, 300 ohms input)	50 µV
Quieting Slope (Mono)	
RF Input for 30 dB Quieting	9.3 dBf (1.6 µV)
Quieting at:	
20 dBf (5.5 µV)	58 dB
25 dBf (10 µV)	62 dB
40 dBf (55 µV)	70 dB
65 dBf (1000 µV)	74 dB
Quieting Slope (Stereo)	
Quieting at:	
30 dBf (17 µV)	42 dB
40 dBf (55 µV)	53 dB
50 dBf (173 µV)	58 dB
65 dBf (1000 µV)	65 dB
Distortion (Mono) at 65 dBf (1000 µV)	
100 Hz	0.25%
1000 Hz	0.15%
6000 Hz	0.3%
Distortion (Stereo) at 65 dBf (1000 µV)	
100 Hz	0.35%
1000 Hz	0.3%
6000 Hz	0.5%
Distortion (Mono and Stereo)	
at 50 dB Quieting, 1000 Hz	0.6%
Hum and Noise	
at 65 dBf (1000 µV)	
Mono	72 dB
Frequency Response	
30 Hz to 15 kHz	
Mono	+0.2, −1.5 dB
Stereo	+0.2, −1.5 dB
Capture Ratio	
at 45 dBf (100 µV)	1.5 dB
at 65 dBf (1000 µV)	1.0 dB
Alternate Channel Selectivity	70 dB
Spurious Response Rejection	90 dB
Image Response Rejection	60 dB
I.F. Rejection (Balanced)	80 dB
A.M. Suppression	50 dB
Stereo Separation	
100 Hz	40 dB
1000 Hz	45 dB
10 kHz	40 dB
Subcarrier Rejection	60 dB

AM TUNER SECTION:

IHF Usable Sensitivity	15 µV
Distortion (THD), 30% Modulation	0.5%
Signal-to-Noise Ratio	50 dB
Frequency Response (±3 dB)	40 Hz to 2.3 kHz

Alternate Channel Selectivity	46 dB
Image Rejection	45 dB
Spurious Response Rejection	60 dB
I.F. Rejection	40 dB

GENERAL:

Power Requirements	120 V AC, 60 Hz (U.S.A. and Canadian Versions) 220 V AC, 50 Hz (European Version) (This unit can be converted by a qualified technician to operate on 110/120/240 V AC, 50/60 Hz.)
Power Consumption	23 W
Semiconductor Complement:	
Integrated Circuits	3
Transistors	9
Diodes	7
Dual Gate MOSFET	1
Dimensions:	
Panel Width	416 mm (16-3/8 inches)
Panel Height	146 mm (5-3/4 inches)
Depth	239 mm (9-3/8 inches)
Weight:	
Unit alone	6.0 kg (13.2 lbs)
Packed for shipment	7.4 kg (16.3 lbs)